

at a touch from the leaves and twigs of this tree was a mystery, but they brought off their brood.

To the nest-making materials already given, cotton-wool (*Gossypium*) may be added. On the 11th of February, 1914, a nest was found partly made of this.

To Mr. P. R. Lowe thanks are due for the identification of most of the foregoing birds. If his knowledge of the birds of the West Indies could have been combined with the writer's opportunities, the Grand Cayman list would, in all probability, be considerably longer than it is.

III.—*Notes on the Birds of the Jhelum District of the Punjab.* By HUGH WHISTLER, M.B.O.U. *With Notes on the Collection by CLAUD B. TICEHURST, M.A., M.B.O.U.*

(Plate II.)

It was with considerable pleasure that, on arrival from leave in England in April 1913, I learnt that I had been posted to the district of Jhelum in the Rawal Pindi division of the Punjab. Before my departure I had already spent a year in the adjoining district of Rawal Pindi, and had, therefore, a general knowledge of the avifauna which I would come across and the points on which to concentrate special attention. Besides this, there was the additional attraction that, while the whole northern and central Punjab (which was added to British territory at a comparatively late date) is but little dealt with in Indian ornithological works, the district of Jhelum had practically been left untouched, yet it is these north-western districts bordering upon the Himalayas which most repay study.

The district is thus described in the 'Gazetteer':—
"Jhelum District.—A district in the Rawal Pindi division of the Punjab, lying between $32^{\circ} 27'$ and $33^{\circ} 15'$ N. and $72^{\circ} 32'$ and $73^{\circ} 48'$ E., with an area of 2813 square miles.

The length from east to west is 75 miles, its breadth increasing from two miles in the east to 55 in the west. It is bounded by the districts of Shahpur and Attock on the west and by Rawal Pindi on the north, while the Jhelum River separates it from Kashmir territory on the north-east, and from Gujrat and Shahpur on the south-east and south (see map Pl. II.).

"The district naturally falls into three divisions. Of these, the north-eastern, which includes the Chakwal tahsil and the narrow Pabbi tract in the north of the Jhelum tahsil, is a wide and fertile plateau ranging from 1300 to 1900 feet above the sea, with a decided slope to the north-west, until at the Sohan River it reaches the boundary of the district. This plateau is intersected by numerous ravines, which, with the single exception of the Bunha torrent on the east, drain into the Sohan. To the south it culminates in the Salt Range, which runs in two main ridges from east to west, now parallel, now converging, meeting in a confused mass of peaks east of Katas and opening out again. Between these ranges is a succession of fertile and picturesque valleys, set in oval frames by the hills, never more than five miles in width and closed in at either end. The Salt Range runs at a uniform height of 2500 feet till it culminates in the peak of Chail (3701 feet). At the eastern end of the Salt Range two spurs diverge north-eastwards, dividing the Jhelum tahsil into three parallel tracts. The northernmost of these, the Pabbi, has already been described. The central tract, lying between the Nili and Tilla spurs, is called the Khuddar, or country of ravines. The whole surface seems to have been crumpled up and distorted by converging forces from the north and south. Lastly, south of the Tilla Range, lies the riverain tract, which extends along the river from Jhelum town in the north-east to the Shahpur border. Broken only near Jalalpur by a projecting spur of the Salt Range proper, this fertile strip has a breadth of about eight miles along the southern boundary of the Jhelum and Pind Dadan Khan tahsils."

The most important elevations are as follows :—

Tilla, 3215 feet.	Domeli Station, 1267 feet.
Sardi, 2850 feet (approx.).	Ara , 2173 feet.
Kallar Kahar, 2171 feet.	Tarki , 1216 feet.
Bhon, 1953 feet.	Sohawa , 1426 feet.
Langarpur, 1292 feet.	Chakwal , 1550 feet.
Pind Dadan Khan, 731 feet.	Jhelum , 827 feet.
Dina, 901 feet.	

Jhelum is mentioned occasionally in books on Indian ornithology—as, for instance, in Blanford & Oates's volumes on Birds in the 'Fauna of British India' series it is given as a southern point to which *Corvus monedula* reaches, and as the type-locality for *Molpastes humei*, while in Hume's 'Nests and Eggs of Indian Birds' there are several notes on eggs taken about Pind Dadan Khan by Mr. Theobald.

These, however, are but scattered entries without connection, and in no way represent the real interest of the district. It is well worth study for several reasons. Of these, the most outstanding is its geographical position in the angle between two great masses of mountains at the meeting of the Indian and the western Palæarctic regions, and near the north-western gateway into India. The result of this position is seen both in the number of western Palæarctic birds which occur in the district as winter visitors or passage migrants, and in the clearness with which migrational movements may be noted; in the latter connection I may note that the Jhelum River appears to form a minor but well-marked migration route, so that the riverain tract, and in especial the Government Rak, may be highly recommended to future observers who desire to watch migrational movements. This Government Rak is a forest reserve, consisting of a block of thick tree and undergrowth jungle, about a mile and a half long and several hundred yards wide, situated on the river-bank just above Jhelum city. In the summer it contains nests of birds such as *Terpsiphone paradisi* and *Zosterops palpebrosa* which otherwise must be

looked for in the Salt Range; and at other times of the year it forms a harbourage for many migrants and winter stragglers, and a roosting-place for many thousands of Rooks, Jackdaws, Starlings, Mynahs, and the like.

Connected with this geographical position, two other results may be briefly noted: one is that in a large percentage of cases the species which are summer or winter visitors are also passage migrants. This may be illustrated by the case of *Siphia parva*, which arrives in great force on the autumn passage; but, although present throughout the winter, it declines very largely in numbers as the passage passes on; it increases again in spring as the passage returns and passes through, sweeping up the birds that only came so far and stayed for the winter. This must occur in the majority of cases, but is not always observable; but where the fact was clearly to be discerned in connection with a species, I have noted it.

The second fact is that during the winter one may find, in proportion to the severeness of the weather, individuals of common Western Himalayan species, *e.g.*, *Myiophonus temmincki* and *Oreicola ferrea*, which have struggled down to avoid the snow. This can hardly be classed as true migration.

One interesting feature of the district remains to be noted. The Salt Range here forms one of the most marked natural boundaries that could be found in the case of two species—*Brachypterus aurantius* and *Crateropus canorus*. During the two years that I have spent in the Jhelum and Rawal Pindi districts, I have never met with a single individual of either bird on the Rawal Pindi side of the Salt Range, while both are common residents on the Jhelum side. *Crateropus canorus* occurs in the valley gardens inside the Salt Range.

Finally, I must emphasize the fact that this article in no way pretends to be a complete list of the birds of the district, while in the cases of many of the species dealt with, their status may require revision. All I have done is to set

on record the results of a year's daily observations between April 1913 and April 1914.

While admitting that a year's observation is not sufficient for the making of a full or authoritative account of the bird-life of any given area, I set the results on record, for India is a land of fleeting tenures, and work that is not published is apt speedily to be lost. These rough notes may serve as a foundation for other observers who chance to be stationed at Jhelum, or prove useful for comparison for ornithologists working in other districts of North-West India.

The nomenclature (with one or two exceptions) is that of the four volumes on Birds by Blanford & Oates in the 'Fauna of British India' series. I have to thank both Dr. Ticehurst and Capt. C. H. T. Whitehead, M.B.O.U., for much help and interest in my observations.

[Mr. Hugh Whistler has asked me to add any notes of interest on the moults and plumages of the skins in his collection, and to identify the racial forms represented. This I have done so far as I am able, and I have also added notes on the soft parts, which were carefully recorded on the labels at the time of skinning. As I have only seen part of the collection, those birds which I have handled have the wing-measurements noted against each in millimetres.—C. B. T.]

***Corvus corax.* The Raven.**

854. 10.9.13. Sardi, 2900 ft., Salt Range. ♂.

A common resident, whose numbers appear to be increased during the autumn and winter months by immigration. It breeds commonly enough in the Salt Range and over the high ground of the Chakwal tahsil. Theobald gives January and February as the months for nesting, but I found nests as follows:—February 24, c/4 fresh; February 24, c/4 incub.; March 8, c/3 incub.; March 12, nest building. Only one of these nests was built on a tree, the remaining three being placed on ledges near the top of small cliffs at the side of watercourses in the broken country about Dumman and Chakwal. The birds were bold and aggressive.

while the nests were being examined. One pair made several stoops at the man as he scaled the cliff-face, and for a moment or two I feared that he was in danger of being made to lose his balance; another pair settled within a yard or two of me as I approached their nest, and when I threw bits of earth to drive them away, merely watched the missiles, leaning to one side or the other to avoid them.

They are accustomed to roost in large companies. During the hot weather from June until October, when I had occasion frequently to traverse the Mandra-Chakwal tonga-road by night, I used to see about fifty birds sleeping in two trees by the roadside, and even during the nesting-season I noted evening flights of birds that were apparently making for similar roosts. In the Salt Range they are very destructive to the millet, cutting off and carrying away whole heads of the seed.

Corvus corone. The Carrion Crow.

Single examples of this species were perhaps seen with the other crows in the Rak on January 13 and 20. I shot the latter but failed to pick it up, so the record must remain doubtful. It is, however, recorded as a fairly common winter visitor to Bannu, and examples are therefore likely to occur in this district.

Corvus frugilegus. The Rook.

908. 27.10.1913.	Jhelum.	♀.	Wing 315 mm.
910. 29.10.1913.	„	♀.	
913. 30.10.1913.	„	♀.	Wing 292 mm.
923. 6.11.1913.	„	♀.	
924. „	„	♂.	Wing 320 mm.

An extremely numerous winter visitor to the plains about Jhelum, but apparently not occurring at Chakwal or in the Salt Range except as a straggler. The first birds arrived about the third week of October, and the species was abundant by the end of the month, although its full numbers were perhaps not attained until December. It continued in force throughout January, but a decrease became apparent about the second week of February, and there were

comparatively few left by the end of the month. A few birds continued throughout March, a flock of about a hundred being seen as late as the 22nd. The last seen was a single bird on March 31.

From the vast quantities of Rooks which sleep in the Rak at Jhelum and the fact that I was unable to learn of any other roosting-place, I believe that the species is only found in the district within an easy flight of Jhelum : at any rate, I only saw it further afield on one occasion, when a small party (probably migrating) were seen on the tonga road on February 22.

Morning and evening the birds pass to and from the Rak. The evening flight commences early, and birds arrive in large flocks at intervals for two or three hours before dusk ; during the warmer weather in October and November the sand-banks by the river are black with the birds that settle to drink, but this "nightcap" is stopped as the nights become cold. The morning flight is a much shorter affair, the birds departing more *en masse* soon after sunrise.

[The form *C. f. tschusii* Hartert is said to occur in north-west Punjab in winter ; it differs from the typical bird in its weaker, straighter, and thinner bill. The Jhelum birds which I have examined, however, cannot be picked out from a series of the typical birds from England, whence I have birds whose bills are equally weak, straight, and thin, equal or even shorter in the wing, and whose feet are precisely similar to the Jhelum birds ; therefore I must assign Mr. Whistler's specimens to the typical race.—*C. B. T.*]

Corvus splendens. The Indian House-Crow.

697 a. 28.4.1913. Jhelum. Wing 243 mm.

697. " " " Wing 270 mm.

811. 12.8.1913. " " Juv.

Resident and extremely abundant everywhere, except, of course, that but few are found on the higher portions of the Salt Range, where there is not much to attract them. Nidification begins about the middle of June, most eggs being

found from the end of the month until the middle of July. Thousands roost in the Rak all the year round, and I could see no diminution in the morning and evening flights even during the nesting-season. The mortality amongst them appears to be very heavy, as the ground in the Rak is littered with remains; some of the deaths are doubtless due to disease, as on several occasions I caught sickly birds on the ground, but the majority of the remains are undoubtedly those of birds who have fallen into the clutches of the Eagle-owls and Peregrines which haunt the jungle.

[In one of the April birds the plumage is worn and the wings brownish, it is moulting heavily on body and tail; the other is in full fresh feather. The juvenile differs from the adult in having the crown and throat less black, the nape less grey, and the underparts less pure, as well as being less glossy generally.—*C. B. T.*]

Corvus monedula. The Jackdaw.

922. 6.11.13. Jhelum. Wing 240 mm.

950. 11.12.13. „ ♂.

977. 10.1.14. „ ♀. Wing 224 mm.

979. 20.1.14. „ ♂. „ 242 mm.

996. 30.1.14. „ „ 235 mm.

A common winter visitor to the immediate neighbourhood of Jhelum, but not noted elsewhere. They first arrived about the middle of October, and became common by the end of that month, continuing numerous until well into February: up till this time they had always been found in company with the Rooks, roosting with them in the Rak and joining in the morning and evening flights. But during the second half of February small flocks composed of Jackdaws alone were noted (in addition to the birds in the flocks of Rooks); this fact probably indicated the commencement of the return migration, marked by a separation of the two species consequent on their different destinations. By the middle of March there were but very few about, the last bird being noted on the 28th of that month.

[Nos. 922, 977, and 996 are typical *C. m. collaris* ; 979 is not to be distinguished from British-shot specimens, its underparts being no paler, and there is no trace of any collar round the neck. The January birds through wear are already becoming brown on the exposed parts of the wing.—C. B. T.]

Dendrocitta rufa. The Indian Tree-Pie.

Common in the gardens of Chua Saidan Shah, when I was there in June and July. It is probably a resident. A pair seen on the Chakwal tonga-road on February 22nd, near Dudhial, were the only ones met with outside the Salt Range.

Parus atriceps. The Indian Grey Tit.

939. 1.12.13. Jhelum. ♂.

1363. 5.4.14. „ ♀. Wing 71 mm.

A common winter visitor, usually collecting in flocks. The first individual was noted on October 11, and the species became fairly general at once, and numerous by the end of the month. The return migration probably started about the beginning of March, but there were a fair number of birds remaining until the end of the month : an odd bird or two were seen as late as the 4th and 5th of April.

[Iris dark brown ; feet lead-blue ; bill black.—C. B. T.]

Parus monticola. The Green-backed Tit.

1305. 13.2.14. Jhelum. Wing 64 mm.

Status not quite certain, but probably a winter visitor in small numbers from the latter half of October until the end of February.

[Iris dark brown ; feet lead-blue ; bill bluish black, lighter at the base.—C. B. T.]

Anthoscopus coronatus. The Turkestan Penduline Tit.

Although no specimen was obtained, I have no hesitation in referring to this species a party of small birds seen in the Rak on March 27, 1914, and recorded by me in the Journal of the Bombay N. H. S. vol. xxiii. p. 153.

Within Indian limits these Tits have previously been recorded only from Kohat and Sind.

Argya caudata. The Common Babbler.

730. 24.5.1913. Chakwal. ♂. Wing 83 mm.

Resident and very numerous in the Salt Range and the high plateau of the Chakwal tahsil ; it is probably double-brooded, as nests may be found from April until June.

[Iris yellow-brown ; feet olive-yellow, claws dusky ; bill olive-green, blackish at tip ; orbicular olive-lead ; tail in moult.—C. B. T.]

Crateropus canorus. The Jungle Babbler.

738. 30.5.1913. Jhelum. Wing 109 mm.

An abundant resident, but somewhat locally distributed ; it is common in the Rak and in the gardens of Chua Saidan Shah, but is not met with in that portion of the district which lies north of the Salt Range, nor does it occur in Rawal Pindi district ; the northern crest of the Salt Range must therefore be taken as its extreme boundary in this part of India. It nests very commonly in the Rak throughout June, but I found a nest containing a single egg on March 27, and a nest with four eggs on April 8.

[Iris pale yellowish white ; feet fleshy white ; bill flesh-coloured, gape yellowish.—C. B. T.]

Myiophonus temmincki. The Himalayan Whistling-Thrush.

A single bird was seen on December 21 at Tarki, where it was frequenting the stony hill above the railway : a winter straggler only.

Zosterops palpebrosa. The Indian White-eye.

754. 7.6.1913. Jhelum. Wing 58 mm.

911. 30.10.1913. " " 57 mm.

984. 23.1.1914. " ♂. " 58 mm.

Exact status uncertain : it nests commonly enough about June in the Rak and the gardens of the Salt Range, and is fairly common during the winter throughout the district. But having regard to the fact that in the Punjab, N.W. Frontier Province, and N.W. Himalayas generally, the White-eye is migratory, I do not feel sure that the winter

birds are the same individuals as those that breed here. For it may be noted that the species appears to be less common in winter than in summer, while that would hardly be the case if the summer birds stayed on with the birds that *must* arrive in winter from the hills. In the breeding-season the males sing freely—the song is short and rather pretty: it begins so low as to be almost inaudible, and becomes louder and louder until at the end it is almost harsh, and this is repeated again and again without variation.

[Iris yellow-brown; feet lead-blue; bill lead-blue, basal part of lower mandible very dark.—*C. B. T.*]

Hypsipetes psaroides. The Himalayan Black Bulbul.

1304. 13.2.1914. Jhelum. ♂. Wing 115 mm.

A winter visitor in flocks to Jhelum itself, but not observed elsewhere. It arrived in the first week of February and stayed until about the middle of March, when its numbers decreased, a few remaining throughout the month. The last party was noted on the 8th of April. They fed freely on unripe mulberries, and were easily observed owing to their noisy and incessant calls.

[Iris dark brown; bill and feet coral-red, claws black.—*C. B. T.*]

Molpastes intermedius. The Punjab Red-vented Bulbul.

750.	5.6.1913.	Jhelum.	♀.	Wing 98	mm.
764.	17.6.1913.	„	♀.	„	97 mm.
773.	1.7.1913.	Chua Saidan Shah.	♀.	„	89.5 mm.
777.	28.6.1913.	Jhelum.	♀.	„	92 mm.
785.	13.7.1913.	„	♂.	„	91.5 mm.
790.	18.7.1913.	„	♀.	„	95 mm.
834.	23.8.1913.	„		„	93 mm.
931.	20.11.1913.	„	♀.	„	98 mm.
985.	24.1.1914.	„	♂.	„	99 mm.
1307.	15.2.1914.	„	♀.	„	98 mm.
1308.	16.2.1914.	„	♂.	„	98 mm.
1315.	19.2.1914.	„	♀.	„	96.5 mm.
1317.	25.2.1914.	„	♂.	„	104 mm.

A common resident throughout the district. A large series was collected because the birds found at Jhelum were in many cases somewhat intermediate in plumage between *Molpastes intermedius* and *Molpastes haemorrhous*, the Red-vented Bulbul of the southern Punjab.

No hybrids between this species and *Molpastes leucogenys* were obtained, but in Jhelum itself, where most of my collecting was done, the latter bird is very scarce; however, on 21th of May at Chakwal, I saw signs of courting rivalry between two *M. intermedius* and one *M. leucogenys*.

This Bulbul breeds from May until August, the majority of nests being found in May and June.

[The June and July birds are in worn breeding-dress, the November bird is in fresh-moulted dress. 785 and 831 are juvenile birds moulting into first winter plumage, the wings and tail being moulted as well as the body-feathers. The juvenile dress differs from that of the adult in having the throat and head brown, the under tail-coverts orange-red instead of crimson, and the wing and tail paler brown, the latter with buff tips instead of white. *M. haemorrhous* of the southern Punjab differs from *M. intermedius* from northern Punjab in having the black of the crown sharply marked off from the hind-neck and in having black ear-coverts instead of brown; typical birds were obtained by Mr. Whistler from Hissar and Ferozepur, whilst typical *M. intermedius* were met with at Rawal Pindi. The Jhelum birds are rather difficult—750, 764, 931, and 1308 are typical *M. intermedius*; all the other adults, whilst having the brown ear-coverts of *M. intermedius*, have the black crown more or less sharply marked off from the hind-neck as in *M. haemorrhous*. As typical *M. haemorrhous* was not found at Jhelum, though looked for, it appears that there can be no question of interbreeding, but rather a variation of one race towards the other.—C. B. T.]

Molpastes leucogenys. The White-cheeked Bulbul.

735. 27.5.1913. Dalur, Salt Range. ♂. Wing 91 mm.

A resident and partial migrant. It breeds very commonly from May to July all over the Salt Range, and numbers descend during the winter to the Chakwal Plateau, where

they are numerous enough from October to April. At Jhelum they are seldom seen; a pair roosted in one particular tree in my compound from about 25th February to 16th March, and a party of five were seen by the river on the evening of 25th March. These were certainly migrants, as the place where they were found was a favourite resting-place for migrating birds, and no others were seen near there during the rest of the year. These five birds were very restless, calling and flying up to hover in the air as if they were impatient to be off again. I emphasize the point, as the species is usually considered most strictly non-migratory.

Theobald's note on the nesting of *Molpastes leucotis* in the Salt Range (Hume, 'Nests and Eggs,' 2nd ed. vol. i. p. 177) must be a mistake and must refer to this species, which he does not otherwise mention. I did not meet *M. leucotis* anywhere within the district.

***Molpastes humii.* Hume's White-eared Bulbul.**

The type-specimen of this species was obtained at Jelalpur in 1871 (Fauna B. I., Birds, vol. i. p. 274). It would be advisable to examine this specimen again with reference to Messrs. Magrath and Whitehead's discovery of the presence of hybridism in this genus.

Sitta sp.?

A White-cheeked Nuthatch was seen in the Rak on October 29, but I failed to secure it and could not identify the species.

***Dicrurus ater.* The Black Drongo.**

737. 29.5.1913. Jhelum. ♂. Wing 147 mm.

A resident in small numbers and a very abundant summer visitor, breeding freely in May and June. It is rather difficult to observe their movements accurately, but the vast mass of King Crows probably arrive in March and reach their full numbers by the end of the month, continuing in full force until well into September. The return migration is a leisurely one, spread out until the middle of November. From then onwards, until the end of February, the species is distinctly scarce; but there is, perhaps, a slight increase in

January and February which is the forerunner of the spring immigration of March.

The pugnacity of the Drongo is well known, but I was surprised to see one attack a Merlin that I dislodged from some cover. It was a pretty sight to see both birds twisting and fluttering together.

[Iris red-brown; bill and feet black.—*C. B. T.*]

Certhia himalayana. The Himalayan Tree-Creeper.

897. 11.10.1913. Jhelum. Wing 66.5 mm.

A common winter visitor from the middle of October until the middle of March, first seen on October 11 and last noted on March 25. They are often seen accompanying the flocks of Tits and Warblers.

[Feet and bill dark brown, basal two-thirds of lower mandible flesh-coloured.—*C. B. T.*]

Tichodroma muraria. The Wall-Creeper.

999. 8.2.1914. Jhelum. ♂. Wing 102.5 mm.

1339. 13.3.1914. Dumman. „ 98 mm.

A winter visitor in small numbers, occurring from January until about the middle of March. It was usually found in the broken ground of the Chakwal Plateau, but No. 999 was shot from a low earth-cliff on the edge of the river. It had been observed in the same place on January 12.

[Iris brown; feet and bill black.

999 is in winter plumage; 1339 is moulting the whole of the upper parts and the throat, and is nearly in full summer plumage.—*C. B. T.*]

Acrocephalus dumetorum. Blyth's Reed-Warbler.

807. 8.8.1913. Jhelum. ♂. Wing 62.5 mm.

813. 13.8.1913. „ ♂. „ 62.5 mm.

812. „ „ „ 60 mm.

822. 18.8.1913. „ ♂. „ 60.5 mm.

832. 21.8.1913. „ ♂. „ 63 mm.

833. „ „ „ 60 mm.

1375. 12.4.1914. „ ♂. „ 62.5 mm.

An abundant passage migrant in March, April, and May, and again in August, September, and October.

[Iris light brown; bill brown above, flesh-coloured below; tarsi and feet brown, soles yellowish; gape and mouth yellow.

All the autumn-shot birds are in very worn breeding-dress except 812, which is freshly moulted; the April bird is in rather less-worn plumage. On a large series I find the wing-formula varies: most commonly the second primary is equal to the fifth or sixth or between the two, exceptionally it is between the fourth and fifth or sixth and seventh.—*C. B. T.*]

Acrocephalus agricola. The Paddy-field Reed-Warbler.

896. 11.10.1913. Jhelum. ♂.

A passage migrant, but exact status uncertain.

[Iris yellow-brown; feet lemon; bill dark horn-coloured, flesh-coloured at the base of lower mandible.

This bird has nearly finished a complete moult; I am unable to state to which race it belongs.—*C. B. T.*]

Orthotomus sutorius. The Indian Tailor-Bird.

A very common resident, occurring both in the plains and the gardens of the Salt Range. Breeds in May and June. I found it extremely difficult to secure eggs from the fact that the birds deserted unfinished nests as soon as they had been found and looked at, even if not touched.

Cisticola cursitans. The Rufous Fantail-Warbler.

720. 10.5.1913. Jhelum. ♂. Wing 52.5 mm.

Noted commonly from March until August, but largely or entirely disappearing during the winter.

[Iris yellow-brown; feet light brown; bill black-brown above, light flesh-coloured below.

Complete moult just commenced.—*C. B. T.*]

Hypolais rama. Sykes's Tree-Warbler.

740. 30.5.1913. Jhelum. ♂. Wing 61.5 mm.

831. 21.8.1913. " ♀.

865. 17.9.1913. " ♂.

885. 3.10.1913. " "

1353. 25.3.1914. " ♂. Wing 59.5 mm.

A spring and autumn passage-migrant in small numbers. On the spring migration it was met with as late as June, when individuals were found singing in the dense mulberry undergrowth of the thicker parts of the Rak.

[Iris brown; feet dull brown; bill dark brown above, horn-coloured below.

The remarks of Mr. Whistler, and the fact that the bird shot on May 30 had the testes much enlarged, suggest that this species was breeding in the Jhelum district. This would be an extension of the breeding-range (see Hartert, Vög. pal. Faun. p. 575). The autumn specimens are just completing an entire moult, and the underparts are much more washed with buff at this time of year than in the spring.—*C. B. T.*]

Sylvia affinis. The Indian Lesser Whitethroat.

884. 3.10.1913. Jhelum. ♀. Wing 64 mm.

1333. 9.3.1914. , , , 67.5 mm.

A common passage-migrant in March and April, and from August to October; also a winter visitor in smaller numbers. It is usually to be met with feeding in Kikur trees, the forehead being often heavily covered with pollen from the yellow blossoms.

[Iris brown; feet dark blue-grey; bill blue-grey at base, blackish at the tip.

The March bird is going through a complete body moult, which includes the inner three tertials; rest of wings and tail moderately worn. Although the differences in colour between this race and *S. c. curruca* are not constant, I find that in a large series the wing-formula of *S. affinis* is strangely constant, the second primary being between the sixth and seventh. In a series of *S. curruca* it is between the fourth and fifth or fifth and sixth.—*C. B. T.*]

Phylloscopus tristis. The Brown Willow-Warbler.

671. 10.4.1913. Dhodi. Wing 55 mm.

899. 14.10.1913. Jhelum. ♀. , 56.5 mm.

900. , , , 57 mm.

915. 1.11.1913. , , 60.5 mm.

917. 4.11.1913. Jhelum. Wing 61 mm.
 918. " " " 58.5 mm.
 948. 10.12.1913. " ♀.
 968. 3.1.1914. " " 62.5 mm.
 1303. 12.2.1914. " " 65 mm.
 1358. 30.3.1914. " ♀. " 55 mm.
 1359. 31.3.1914. " ♀. " 54.5 mm.
 1374. 11.4.1914. " ♀.
 1376. 12.4.1914. " ♀. " 53 mm.

The most abundant species of Willow-Warbler that occurs in the district, being found as a winter visitor from September (a few individuals probably arriving in August) until about the end of April. Most abundant in the Rak, where it particularly affected the tangle of roots and leafy branches of the Irabi bushes which jut over the river along the whole margin of the eroded banks.

[Iris and feet dark brown, soles yellowish to olive; bill dark brown, base of lower mandible greyer.

The March and April birds have commenced to moult the body-feathers. January and February specimens are worn.
—C. B. T.]

Phylloscopus subviridis. Brooks's Willow-Warbler.

914. 1.11.1913. Jhelum. ♀.
 937. 1.12.1913. " Wing 5.15 mm.
 1337. 11.3.1914. Dumman. " 54.5 mm.

A winter visitor in small numbers to the district.

[Bill brownish black, gape and base of lower mandible yellow; feet dull brown, soles olive-yellow.

The March bird is moulted its body-feathers.—C. B. T.]

Phylloscopus humii. Hume's Willow-Warbler.

933. 21.11.1913. Jhelum. ♂. Wing 59.5 mm.
 940. 2.12.1913. " " 54 mm.
 1302. 12.2.1914. " " 55.5 mm.
 1310. 17.2.1914. " " 53 mm.
 1380. 15.4.1914. " ♀. " 52 mm.

A winter visitor to the district, where it is rather more common than the last species.

[Iris dark brown; feet brown, soles yellowish; bill dark brown, base of lower mandible paler; orbicular plumbeous.

The February birds are in worn plumage; the April bird is doing a complete body-moult. All five specimens lack any trace of coronal streak.—C. B. T.]

Acanthopneuste nitidus. The Green Willow-Warbler.

672. 10.4.1913. Dhodi. ♂. Wing 64 mm.

806. 7.8.1913. Jhelum.

1371. 11.4.1914. , ♂. Wing 66 mm.

1373. , , , 67 mm.

A common spring and autumn passage-migrant about April and August.

[Iris dark brown; feet brown, soles yellowish; bill dark brown above, flesh-brown below.

The April birds have recently moulted the body-feathers.
—C. B. T.]

Acanthopneuste viridanus. The Greenish Willow-Warbler.

819. 17.8.1913. Jhelum. ♀. Wing 57.5 mm.

837. 31.8.1913. , , 62 mm.

841. 4.9.1913. , , 58.5 mm.

842. , , ♂.

Met with in fair numbers on the autumn migration in August and September.

[Iris dark brown; feet brown, soles yellow; bill brown above, basal two-thirds of lower mandible yellow.

The August birds are in freshly moulted feather.—C. B. T.]

Acanthopneuste occipitalis. The Large Crowned Willow-Warbler.

821. 18.8.1913. Jhelum. Wing 64.5 mm.

1372. 11.4.1914. , ♂.

A spring and autumn passage-migrant about April and August, but less common than the last two species.

[Iris dark brown; bill dark brown above, yellow below; tarsus lead-brown, feet yellower.—C. B. T.]

Cryptolopha xanthoschista. Hodgson's Grey-headed Fly-catcher-Warbler.

930. 16.11.1913. Jhelum. Wing 51 mm.

966. 2.1.1914. " " 51 mm.

A winter visitor in small numbers; noticed on various dates between November 16 and February 27. Met with either singly or in couples hunting in trees for insects after the manner of Willow-Warbler.

[Iris dark-brown; feet lead-brown; bill dark brown, basal two-thirds of lower mandible yellow.—C. B. T.]

Prinia lepida. The Streaked Wren-Warbler.

Found breeding in April and May in small numbers on the river islands above Jhelum, but the ground there is not very suitable for them. If they occur anywhere commonly in the district, it will be in the river-bed about Pind Dadan Khan, a tract which I had not an opportunity of examining.

Prinia inornata. The Indian Wren-Warbler.

719. 10.5.1913. Jhelum. ♀.

787. 15.7.1913. " ♂.

814. 13.8.1913. "

919. 4.11.1913. "

929. 16.11.1913. "

982. 22.1.1914. " ♀.

A common resident. On March 22 I found a nest with four eggs of the rare type which has the ground-colour white instead of blue-green.

Lanius lahtora. The Indian Grey Shrike.

710. 7.5.1.913. Jhelum. Wing 115 mm.

731. 24.5.1913. Chakwal. " 117 mm.

732. " " Juv. " 113.5 mm.

947. 8.12.1913. " " 108.5 mm.

A common resident, being particularly numerous over the high ground of the Chakwal tahsil. The breeding-season is from March until May.

[*Adult.* Iris dark brown; bill and feet black; mouth flesh-coloured.]

Juvenile. Bill lead-brown above, greyer below; mouth dull yellow; feet lead-grey.

732 is in full juvenile plumage, in which the whole of the upper parts are grey washed with buff, and all the coverts and inner tertials are tipped with buff. 947 is almost out of juvenile plumage by complete body-moult, which includes the moult of inner tertials.—*C. B. T.*]

***Lanius vittatus.* The Bay-backed Shrike.**

846. 5.9.1913. Jhelum. Imm. Wing 79 mm.

A resident in small numbers, largely reinforced during the summer months by breeding immigrants; these arrive in March, breed in April, May, and June, and start to depart in August, and have all gone again by the end of September.

[A juvenile just commencing to moult; it has the upper parts greyish-brown barred with dark brown, tail rufous-brown, ear-coverts dark brown, underparts cream-white, wings brown.—*C. B. T.*]

***Lanius erythronotus.* The Rufous-backed Shrike.**

925. 27.9.1913. Jhelum. ♀. Wing 91.5 mm.; tail 115 mm.

I noted only a few of these Shrikes on various dates from March until May and in October and November, which would suggest that they are passage migrants only. But, from my previous knowledge of the species in other districts, I am inclined to think that this is not a correct description of their status. In Hume's 'Nests and Eggs' (2nd ed. vol. i, p. 320) there is a note of Theobald's that it nests in May in the Salt Range. Its exact status in the district must be considered in need of verification.

[Just finishing a complete moult.—*C. B. T.*]

***Lanius isabellinus.* The Pale-brown Shrike.**

934. 25.11.1913. Chakwal. Wing 92 mm.

971. 10.1.1914. Jhelum. ♂. „ 91 mm.

A winter visitor in small numbers from about the latter half of October until the middle of March.

[Iris brown; feet lead-black; bill brown, base of lower mandible horny-lilac.—C. B. T.]

Pericrocotus brevirostris. The Short-billed Minivet.

A common winter visitor, found usually in flocks. They arrive at the beginning of November and mostly depart in March, but a single bird was seen as late as April 4.

Pericrocotus peregrinus. The Small Minivet.

733. 26.5.1913. Chua Saidan Shah. ♀. Wing 68 mm.
(worn).

832. 18.8.1913. Jhelum. ♂. In moult.

A resident, usually met with in small parties, but not very common. There appears to be a slight increase in their numbers during the winter, so the species may be to a small extent migratory. No. 733 was shot from a nest containing three eggs.

[832 is a juvenile just finishing a complete moult.—C. B. T.]

Oriolus kundoo. The Indian Oriole.

728.	15.5.1913.	Jhelum.	♂.	Wing	136 mm.
739.	30.5.1913.	"	♀.	"	138 mm.
743.	31.5.1913.	"	♂.	"	139 mm.
745.	2.6.1913.	"	♂.	"	137 mm.
748.	4.6.1913.	"	♀.	"	131 mm.
768.	21.6.1913.	"	♂.	"	137 mm.
769.	"	"	♀.	"	136 mm.
771.	1.7.1913.	Chua Saidan Shah.	♂.	Wing	139 mm.
775.	26.6.1913.	Jhelum.		Wing	137 mm.
776.	"	"	Juv.		
781.	8.7.1913.	"	♂.	"	140 mm.

A common summer visitor and passage-migrant from the middle of April until the end of September, the earliest and latest dates on which individuals were seen being April 10 and October 3 respectively. The autumn migration appears to commence in the latter half of August, and the majority

are gone by the middle of September. It is interesting to note that on August 24 there were numbers about the tonga-road from Chakwal to Mandra which were clearly migrating birds, as the locality is unsuited to them; during the many other journeys I made over that road I saw the species but seldom. This Golden Oriole breeds freely in the Rak and the gardens of the Salt Range from the middle of April to the middle of July. The percentage of pairs in which both birds are in full plumage appears to be very small.

[Mr. Whistler's series of Orioles is very interesting, and shows the different plumages at different ages; 781 and 743 are fully adult, 745 and 728 have the dark part of the tail yellowish olive-green, which extends to the outer webs of all the feathers, and there is no black on the wing-coverts; above both are coloured alike and both are streaked with brownish black below. However, 728 has more yellow in the plumage of the underparts than the other (whose throat is greyish white), and its bill is dull claret where the other is only tinged with this colour, while the tips of the primary-coverts make much more of a yellow wing-spot, rather more yellow on the inner webs of the wing, and the lores and orbicular are more marked, so that I am inclined to regard this bird as 24 months old and the greyer duller bird as 12 months old. If this is so, then 768 must be 36 months old with primaries blacker, loral mark and wing-coverts mixed with black, the dark portions of the tail blacker and not reaching the tip of the outer web, while the yellow on the inner web is larger and the upper and under parts of rather a brighter hue. Of the females, 771, 748, 769 have grey throats and their tails are similar, but two of them are yellower underneath than the third; they are similar above, but one has a slight indication of black on the median coverts. I regard these as all probably being 12 months old, though it is difficult to be sure; 771 was paired with a fully adult male, and 769 was paired with 768, which I have regarded as 36 months old. 739 may be of this age also; its wings and tail are like the other three, but it has the throat yellow

and the rest of the plumage slightly brighter. 775 is a brighter bird still, and certainly an older bird ; it has a considerable amount of black in the coverts, the dark parts of the tail blacker, and the yellow is of greater extent in both webs. 776 is in juvenile plumage, and has the upper parts greyish green with pale tips to the feathers ; head, neck, and ear-coverts yellowish green ; whole of underparts white with dark median streaks except on chin and throat.—*C. B. T.*]

***Pastor roseus.* The Rose-coloured Starling.**

815. 13.8.1913.	Jhelum.	Imm.	Wing	123 mm.
818. „ „	„	♂ ad.	„	132 mm.
824. 18.8.1913.	„	Imm.	„	124 mm.
829. 21.8.1913.	„	Imm.	„	125 mm.
830. „ „	„	Imm.	„	128 mm.

Only noted as an autumn passage-migrant, arriving towards the end of July and departing by the end of September. Yet the species is recorded from Kohat (Whitehead, 'Ibis,' 1909, p. 131) as a spring and autumn migrant in vast hordes.

No birds were observed in the district on the spring migration, although when I left on transfer at the middle of April they were about in some numbers as close as Gujranwala, and in countless flocks in the southern Punjab.

[818 and 829 are in very worn breeding-plumage ; the others are in full juvenile plumage.—*C. B. T.*]

***Sturnus humii.* The Himalayan Starling.**

877. 30.9.1913.	Jhelum.	Wing	119 mm.
878, 879. 1.10.1913.	„	„	116 mm.
1369. 9.4.1914.	„	♂.	„ 117 mm.

[The above are probably *S. humii* ; they have the crown purple-blue, ear-coverts green, mantle purple-bronze, scapulars bronze, rather paler edges to the wings and under wing-coverts, and are marked much more heavily and with larger spots than *S. poltaratskyi* and *S. vulgaris* in similar plumage, so that the belly is nearly white.—*C. B. T.*]

<i>Sturnus menzbieri.</i>	The Common Indian Starling.		
921. 5.11.1913.	Jhelum.	♀.	Wing 130 mm.
928. 10.11.1913.	"	"	131 mm.
967. 3.1.1914.	"	♂.	130 mm.
980. 22.1.1914.	"	♀.	127 mm.
1323. 26.2.1914.	"	♀.	120 mm.
1318. 26.2.1914.	"	♂.	132 mm.
1342. 28.2.1914.	"	"	128 mm.

Starlings were more or less abundant in the district from the beginning of October until the end of March, but a few were to be met with for a week or two before and after those times respectively. It is extremely difficult to work out the exact status of different races of these birds, when more than one occurs in the same locality, but I here append a tentative scheme for the above two races, without, however, being able to vouch for its accuracy. According to my observations, therefore, of the two races (no other race was obtained), *Sturnus humii* passed through in small numbers from the middle of September until the middle of October; it was then replaced by *Sturnus menzbieri*, which increased and became very abundant throughout November, declining again throughout January, and being largely, if not entirely, replaced by *Sturnus humii* about the middle of February. The latter became extremely abundant again by the end of February, but had decreased by the end of March, only a few remaining on into April. Throughout their stay Starlings took part in the nightly flight of birds to roost in the Government Rak.

[These are all typical *Sturnus vulgaris poltaratskyi*.—
C. B. T.]

Temenuchus pagodarum. The Black-headed Mynah.

A few birds were noted at Chua Saidan Shah at the end of May and the end of June, so it probably breeds in the garden-areas throughout the Salt Range.

A single specimen was noted in Jhelum on April 22.

Acridotheres tristis. The Common Mynah.

A very common resident everywhere, including the Salt Range. Tremendous numbers arrive nightly to roost in the Rak with the Crows.

Acridotheres ginginianus. The Bank Mynah.

751. 6.6.1913. Jhelum. ♂. Wing 128 mm.

Exact status uncertain: small numbers occurred on the golf-course and joined the evening flight to the Rak from the end of May until the latter half of July. Also a few birds were met with in various places in August, September, November, February, and March.

Hume states that the species nests on the Jhelum river, but does not state in what district.

[Iris red; feet orange; bill reddish orange; facial skin red except middle of eyelid, which is grey.—*C. B. T.*]

Aethiopsar fuscus. The Jungle Mynah.

801. 1.8.1913. Jhelum. Imm. Wing 120 mm.

825. 18.8.1913. " ♂. " 127 mm.

891. 8.10.1913. " Imm.

A common winter visitor from about the middle of August until the end of April, but I have only noted it in the immediate neighbourhood of Jhelum. Their numbers appear to be greatly augmented by migrants in March and April, when they collect in large parties.

[*Adult*. Iris bright yellow; feet duller, claws black; bill orange-yellow, base of lower mandible blackish.

Juvenile. Iris yellow tinged with green; feet dirty yellow; bill yellow, tinged with red on lower mandible.

The adult has just commenced a complete moult; the juvenile plumage differs in having the upper parts brown edged with lighter brown, throat and chin dusky white, and the lower throat and breast lacks most of the slate-grey wash.—*C. B. T.*]

Muscicapa grisola. The Spotted Flycatcher.

855. 10.9.1913. Sardi, Salt Range. ♂. Wing 90 mm.

This specimen was the only one met with; it was observed in a small tree in the compound of the resthouse of Sardi, and was, of course, on migration.

[This belongs to the paler eastern form *M. g. naumannii*.—*C. B. T.*]

Siphia parva. The European Red-breasted Flycatcher.

912. 30.10.1913. Jhelum. ♀. Wing 66 mm.

938. 1.12.1913. " ♀. " 71 mm.

970. 8.1.1914. " ♂. " 69 mm.

1319. 26.2.1914. " ♀. " 68 mm.

An abundant spring and autumn passage-migrant, and a winter resident in much smaller numbers; the spring passage takes place in March and April, the last bird noted being seen on April 27. The autumn passage starts in October (the first bird was met with on October 4), and continues until the middle of November. An occasional adult male was noted in January and February.

[Feet and iris dark brown, soles yellow-brown; bill brown, horny at base. I have carefully compared these specimens with eastern and western European specimens, with which they are exactly similar. 1319 is moulting on the chin and throat; one specimen from Rawal Pindi, I may here note, is on March 28 moulting the head and throat and has attained the blue ear-coverts, moustachial streak, and light loral patch. 970 has chin, throat, and ear-coverts rusty, and is not moulting.—C. B. T.]

Terpsiphone paradisi. The Indian Paradise Flycatcher.

755. 7.6.1913. Jhelum. ♂. Wing 88 mm.; tail 99 mm.

756. " " ♀. " 82 mm.; tail 90 mm.

A spring and autumn passage-migrant in small numbers; a few birds must remain in the summer in the plains, as the two specimens (both in the chestnut plumage with short tails) were shot from a nest with four eggs, built in the middle of the Rak. In the Salt Range gardens it breeds in great numbers in May and June, but I had no opportunity of observing its status there during the remainder of the year. The spring passage through Jhelum occurs in April, the first bird being noted on April 9; the autumn passage takes place in August and September.

[Iris dark brown; feet lead-blue; bill and eyelid cobalt-blue.—C. B. T.]

Rhipidura albifrontata. The White-browed Fantail Fly-catcher.

758.15.6.1913. Jhelum. ♀.

A common resident; its numbers are perhaps increased by immigration in October and November for the winter months, but I am not quite certain on this point. Breeds in June.

Rhipidura albicollis. The White-throated Fantail Fly-catcher.

A rare straggler from the hills. A pair were seen in the District Board garden on November 5, and a single one was noted in the same place on January 13.

Pratincola caprata. The Common Pied Bush-Chat.

685. 21.4.1913. Jhelum. ♀. Wing 70 mm.

A common summer visitor, first noted on February 19 and last on September 15. Nests found in April.

[Probably belongs to the form *P. c. rossorum*, as males from Phelland, Rawal Pindi, and Ferozepur certainly do.—*C. B. T.*]

Pratincola maura. The Indian Bush-Chat.

850. 9.8.1913. Lilla. Imm. Wing 70 mm.

944. 7.12.1913. Chakwal. ♂. „ 73 mm.

A winter visitor, but not very abundant, from September until the beginning of April. There is, however, as one would expect, a marked increase on passage in March, and again in September, of birds that winter further south and nest in the western Himalayas. Hume's statement ('Nests and Eggs,' 2nd ed. vol. ii. p. 48), "Occasionally they breed in the Salt Range," probably refers in part to the Jhelum district.

[These are *Pratincola torquata indica* Blyth.—*C. B. T.*]

Oreicola ferrea. The Dark-Grey Bush-Chat.

904. 20.10.1913. Jhelum. ♂. Wing 69 mm.

1322. 27.2.1914. „ ♂. „ 70 mm.

A straggler from the Himalayas only. The two specimens

(which were the only ones noted) were both obtained in the District Board garden.

[Iris dark brown; feet and bill black.—C. B. T.]

Saxicola picata. The Pied Chat.

A winter visitor in small numbers from the second half of August until about the first week of March. Numerous during the autumn migration until about the middle of October. Last noted on March 8.

Saxicola capistrata. The White-Headed Chat.

1335. 11.3.1914. Dumman. ♂. Wing 95 mm.

945. 7.12.1913. Chakwal. ♀. „ 87 mm.

The most abundant of the Wheatears found in the district; it occurs from the second half of August until about the middle of March, being last noted on March 13. This and the preceding species are now lumped together as one dimorphic species, and when both occur together they certainly behave and mingle together as if one species; but I noted that, whereas *S. capistrata* and *S. picata* were found equally commonly during the autumn migrations, *S. picata* disappeared almost entirely during the winter, while *S. capistrata* remained common. Hence I prefer to keep the two forms apart. The White-headed Chat frequently comes into buildings to roost.

[Mr. Whistler's notes on the distribution in point of time on this supposed dimorphic species are of interest. Major Whitehead ('Ibis,' 1909, p. 216), noted also a difference in the Kohat district. Thus he says of *S. picata*: "fairly common winter visitor from October to March . . . nests freely on the Samana"; of *S. capistrata* he says: "cold weather visitor, very abundant from the third week in August till April . . . In the Kurram valley it nests freely round Parachinar from 4500 to 6500 feet, but rarely as high as 9000 feet." He seems to imply a different breeding habitat for the two forms. Dr. Hartert kindly sent me from Tring some females to compare with Mr. Whistler's birds; they were from Baluchistan, and were quite different from these Punjab birds from Jhelum

and Rawal Pindi in being much darker above and below, and this difference would seem to bear out what Oates says in the 'Birds of India,' when he describes the female of *S. capistrata* as being like *S. picata*, but the chin and throat and breast light fulvous, very little darker than the rest of the lower plumage, upper parts more sandy. In Mr. Whistler's females the lower breast and belly are white. Looked upon in recent years as a case of dimorphism, I think it is still an open question which might be settled by collecting breeding pairs, as, if it finally proves to be a case of dimorphism, the females as well as the males are dimorphic.—*C. B. T.*]

Saxicola opistholeuca. Strickland's Chat.

835. 28.8.1913. Chakwal. ♂. Wing 96 mm.

A common winter visitor from the second half of August until about the second week of March.

Saxicola isabellina. The Isabelline Chat.

Occurs, I believe, as a winter visitor, but I did not actually obtain a specimen.

Saxicola deserti. The Desert Chat.

906. 24.10.1913. Chakwal. ♂. Wing 89 mm.

1340. 13.3.1914. Dumman. ♀. " 98 mm.

A common winter visitor from about the middle of October (but probably earlier) until the middle of March, staying a few days later than all the other species of Wheatear. In the riverain area it is more common than *S. capistrata*, but less numerous than it is in the Pabbi.

I was not able to ascertain (except in the case of *S. capistrata*, which occurs at Sardi) whether the Chats ascend the Salt Range or not. They probably do so.

[This is the eastern form, *S. d. atrogularis* Blyth. The March bird is in worn dress.—*C. B. T.*]

Saxicola chrysopygia. The Red-tailed Chat.

997 & 998. 5.2.1914. Sohawa. Wing 96 and 90 mm.

Noted in February as common in the broken ground at the base of the Salt Range near Sohawa.

[In rather worn plumage; no moult.—*C. B. T.*]

Ruticilla rufiventris. The Indian Redstart.

A common winter visitor from October (a single bird was seen as early as September 16) until about the end of March, by which time the majority have departed, although a few birds linger on until the end of April. A single individual was noticed as late as May 13.

Cyanecula svecica. The Red-spotted Blue-throat.

708. 2.5.1913. Jhelum. ♂. Wing 74 mm.

714. 7.5.1913. " ♀. " 71 mm.

901. 14.10.1913. " ♂. " 76 mm.

Occurs commonly on the spring migrations from March until the middle of May, and on the autumn migrations from the middle of September until the end of October. A few odd birds are to be met with during the winter.

[The males belong to the race *C. s. pallidogularis*.—C. B. T.]

Ianthia rufilata. The Red-flanked Bush-Robin.

965. 2.1.1914. Jhelum. ♀.

The only specimen met with by me was secured in the Rak.

Adelura cœruleiceps. The Blue-headed Robin.

A single bird which I believe was of this species was haunting a compound in the Civil Lines at Jhelum in January and February. The Blue-headed Robin is to be expected here as a winter visitor, as I found it common in Rawal Pindi in January and February, 1911.

Thamnobia cambaiensis. The Brown-backed Indian Robin.

744. 2.6.1913. Jhelum. ♀.

1321. 27.2.1914. " ♂.

A common resident throughout the district, being most numerous on the stony slopes of the Salt Range. In this its habits differ from birds found in the central and southern Punjab, where it is the common familiar bird of gardens and cultivation.

Copsychus saularis. The Magpie-Robin.

A resident in small numbers, but apparently increasing from October to March by immigration, probably of those

birds which breed in the neighbouring foothills. I found a nest with five fresh eggs on July 5 in the District Board garden.

Merula boulboul. The Grey-winged Ouzel.

1316. 15.2.1914. Jhelum. Wing 136 mm.

1320. 26.2.1914. " " " 144 mm.

A winter visitor in small numbers. Besides the above two specimens I saw a fine adult male on February 27 and a female on March 27, both in the immediate neighbourhood of Jhelum. Others were probably missed amongst the numbers of the next species.

[Iris dark brown, eye-rim yellow; feet mixed olive-brown and yellow; bill orange.—*C. B. T.*]

Merula atrigularis. The Black-throated Ouzel.

1311. 17.2.1914. Jhelum. ♀. Wing 133 mm.

A very common winter visitor, occurring in greatest numbers in the neighbourhood of Jhelum itself. The first bird was noted on January 8, and by the end of that month the species had become fairly plentiful. It reached its full numbers about the middle of February and started to decrease again towards the end of that month, the diminution in numbers continuing until the end of March. A few individuals were noted during the first half of April.

I believe I saw a single bird at Sohawa on September 14.

[Eyelids sage-green, gape yellow; feet steel-brown, claws darker; bill dark brown, base of lower mandible yellowish.—*C. B. T.*]

Petrophila cyanus. The Western Blue Rock-Thrush.

A winter visitor in small numbers to the rocky nullahs of the Pabbi tract, where an odd bird or two were noted from December 19 to March 2.

During the autumn migrations on September 4 I wounded but failed to secure what was undoubtedly a specimen of this species in a wood-yard at Jhelum.

Tharrhaleus atrigularis. The Black-throated Accentor.

Noted as common in flocks in December at Sardi by Captain C. H. T. Whitehead.

Uroloncha malabarica. The White-throated Munia.

A resident and most common in the Salt Range and the Pabbi tract ; at Jhelum itself it is but seldom seen. Theobald (Nests & Eggs, ii. p. 136) gives the breeding-season in this district as May, August, September, October, and December.

Propasser grandis. The Red-mantled Rose-Finch.

Captain Whitehead shot a female of this species in December between Sardi and Lilla.

Carpodacus erythrinus. The Common Rose-Finch.

A common spring migrant, passing through from the second half of March until the second week of May. Not noted on the autumn migration. This species is very fond of mulberry fruit, and was often seen in the thickest parts of the Rak, frequenting the mulberry saplings which there form the undergrowth. The song is pleasing and freely uttered.

Acanthis fringillirostris. The Eastern Linnet.

1326. 2.3.1914. Dumman. ♂. Wing 84 mm.

1327, 1328. 3.3.1914. Dumman. ♂, ♂. Wing 84 & 84 mm.

A common winter visitor, probably from November until well into March. Captain Whitehead noted it at Sardi in December, so it probably occurs over the whole Salt Range, but it does not appear to visit the riverain area. I had many opportunities of observing them at Dumman in March, where they were common enough in small flocks or in parties of two or three individuals. These would often be noted flying overhead, attention being called by their twittering note, or settling at the tops of Shisham and Kikur trees. In the early mornings the males were singing freely at the tops of trees round the rest-house.

Hypacanthis spinoides. The Himalayan Greenfinch.

I saw what was almost certainly a Himalayan Greenfinch at Jhelum on January 9, but unfortunately was unable to secure it.

Gymnorhis flavigula. The Yellow-throated Sparrow.

786. 13.7.1913. Jhelum. Imm. Wing 79 mm.

1361. 2.4.1914. „ „ ♂. „ 80 mm.

A very common summer visitor, arriving at the beginning of April. I have not fixed the time of its departure very accurately, but I think it is one of the first of our summer visitors to leave, all probably having gone before the middle of August. The species is found throughout the Salt Range.

[*Ad.* Iris dark brown; bill lead-black; feet plumbeous tinged with purple. The young, in nestling plumage, differs from the adult in lacking the yellow on the throat and the chestnut wing-patch, while the wing-bars are buffish white and the bill flesh-coloured underneath.—*C. B. T.*]

Passer domesticus. The House-Sparrow.

1309. 16.2.1914. Jhelum. ♀. Wing 71.5 mm.

Very common and resident, throughout the district, including the Salt Range.

[A very dull dark bird, but it was shot in the town; it is too dirty to determine the race.—*C. B. T.*]

Emberiza schoeniclus. The Reed-Bunting.

976. 17.1.1914. Jhelum. ♂. Wing 82 mm.

992, 993, 994. 30.1.1914. Jhelum. ♂, ♂, ♀. Wings 81, 81, 76 mm.

Small numbers were noted haunting some Iribi bushes by the river during January and February, and on the 4th of February a few were found roosting in the reed-grass by a small pond at Sohawa. It is probably a regular winter visitor in small numbers during January and February only.

[Iris dark brown; feet more dusky; bill horn-colour above,

steel-colour below. These pale birds are referable to *E. s. pallidior* Hartert, and Jhelum is an extension of its range, *vide* Vög. pal. Faun. p. 197.—C. B. T.]

Emberiza leucocephala. The Pine-Bunting.

1313. 18.2.1914. Jhelum. ♂. Wing 91.5 mm.

1329. 3.3.1914. Dumman. ♀. „ 85 mm.

The male was secured from a flock which appeared on the golf-course on February 18; the female was a solitary bird. In addition to these two occurrences, I saw what I took to be a number of these birds feeding in the fields near Dhadhi on April 10, 1913. The species is probably a regular spring visitor in small numbers. This appears to be an extension of its recorded range.

[Iris dark brown; tarsus pale brown, feet darker, claws blackish; bill horny, darker above. In worn plumage.—C. B. T.]

Emberiza stewarti. The White-capped Bunting.

Occurs in small parties as a visitor from the Himalayas. Noted on December 18 at the foot of the Salt Range near Parhi Darweza, and on April 10 near Jhelum.

Emberiza stracheyi. The Eastern Meadow-Bunting.

A winter visitor, usually met with in parties: I noted it from December until March, but it possibly occurs earlier.

Emberiza luteola. The Red-headed Bunting.

907. 25.10.1913. Chakwal. ♀. Wing, in moult.

Noted as common in the crops during the autumn migration at the end of August over the Chakwal plateau.

[Iris dark brown; feet pale brown; bill steely flesh-brown above, greenish tinge at gape. Just finishing a complete moult.—C. B. T.]

Emberiza striolata. The Striolated Bunting.

956. 18.12.1913. Parhi Darweza. ♀. Wing 75 mm.

958. 19.12.1913. „ „ „ „ 98.5 mm.

Very probably a resident, but I only met with it during the winter.

[Iris dark brown, orbicular sage; feet yellow-brown, claws blackish; bill blackish brown above, yellow below.—*C. B. T.*]

Note.—The notes on Buntings are very incomplete, as on many occasions I met parties which I was unable to identify, notably at Lilla in September.

Melophus melanicterus. The Crested Bunting.

A pair of birds seen near the Rak on September 17 were almost certainly of this species.

Cotile diluta. The Pale Sand-Martin.

721. 10.5.1913.	Jhelum.	Imm.	Wing 89 mm.
898. 11.10.1913.	„	„	98 mm.
1346. 18.3.1914.	„	♂.	89 mm.
1349. 22.3.1914.	„	♀.	95.5 mm.

Status not quite certain, but possibly a resident, though there is some ground for supposing that it disappears from July to September during the rains. They breed in February and March along the river-banks and are seldom seen away from the river.

[Mr. Whistler notes of 898 that it was shot from a number of Sand-Martins of *two sizes* flying about the river in company with a number of *Hirundo smithii*. This specimen is a juvenile just commencing a full moult, and has longer wings and tail than any other Jhelum specimens sent. I think it may be an example of *C. diluta*.

Dr. Hartert (Vög. pal. Faun. p. 813) gives the measurements of the wing of *C. diluta* as “♂ ♀ 100–105 mm.,” from *summer visitors* breeding on the R. Lena. This race was described by Sharpe and Wyatt from specimens from Chimkent and Tashkent in Turkestan. Breeding-birds from the Punjab, however, I find only measure, ♂ 95–98, ♀ 88–89 mm., and therefore I think it is justifiable to separate these (and in this Dr. Hartert, who has kindly examined the specimens, agrees with me), which are apparently a *resident* short-winged race, for which I propose the name

T
RIPARIA RIPARIA INDICA, subsp. nov.

Description. Similar to *R. r. diluta*, but has shorter wings and tail, the latter, perhaps, somewhat less forked. Differs from *R. r. littoralis* in its rather paler upper parts and in having the pectoral band paler, less distinctly marked, and sometimes almost wanting.

Wing: ♂ 95-98 mm., ♀ 88-89 mm. Tail 40-43 mm. Tarsus 10 mm. Bill from edge of forehead-feathers about 6 mm. Feet brownish; bill blackish.

Type-locality. Punjab, India (Jhelum and Ferozepur).

Type-specimen. H. Whistler coll. No. 1349, ♂. Jhelum, 22.3.1914. From a breeding-colony. Wing 95; tail 43; tarsus 10; bill 6 mm.: central tail-feather only 3 mm. shorter than the laterals.

March specimens are slightly worn; 721 is a juvenile, and has faint rusty-grey edges to the upper parts and pale rusty edges and tips to all the coverts and tertials.—C. B. T.]

Ptyonoprogne rupestris. The Crag-Martin.

A few were noted near Chakwal on April 13, 1913, and one or two were seen at the base of the Salt Range, near Sohawa, on February 4, 1914. In addition to the above, I believe I saw some flying in company with *H. rustica* at Jhelum on March 31, 1914. No specimen obtained.

Hirundo rustica. The Swallow.

887. 6.10.1913. Jhelum. Wing 118 mm. (worn).

888. " " " 122 mm. "

A spring and autumn passage-migrant in considerable numbers. The spring migration was at its height in March and April, but a few birds were seen from the 1st of February onwards. The autumn migration passed through in the first half of October (and probably the latter half of September, but I was away then), a few birds being seen in July and August.

[Both these specimens, which are adult, have nearly finished a complete moult at a period when in England the species has not begun to moult. These belong to the typical race.—C. B. T.]

Hirundo smithii. The Wire-tailed Swallow.

A summer resident, arriving in April, breeding from May to August, and departing by the end of the third week in October. Probably also a passage migrant in fair numbers. They are doubled-brooded, and some pairs probably nest even a third time.

Hirundo fluvicola. The Indian Cliff-Swallow.

669. 7.4.1913. Sohawa. ♂. Wing 96 mm.

767. 21.6.1913. Jhelum. „ 98 mm.

782. 9.7.1913. „ „ 90 mm.

Noted in some numbers in April, June, and July. Status uncertain, but possibly a passage migrant. A few colonies may breed in the Salt Range.

[Iris dark brown; bill and feet black. 782 has just commenced moult of body and wings.—C. B. T.]

Hirundo erythropygia. Sykes' Striated Swallow.

1364. 6.4.1914. Jhelum. ♂. Wing 117 mm.

1365. 8.4.1914. „ ♂. „ 115 mm.

1366. „ „ ♂. „ 112 mm.

Breeds chiefly in the Salt Range, in small numbers, from May to July. A well-marked passage of these birds at Jhelum was noticed in February and April, and probably a similar passage takes place in August and September, as it does in the neighbouring district of Rawal Pindi. More observations are needed to settle its exact status, and also to see whether all the Striated Swallows that occur in this district belong to this species or not.

[Iris and feet dark brown; bill black. These belong to the race described by Seebold as *H. rufula scullii*.—C. B. T.]

Motacilla alba. The White Wagtail.

703. 2.5.1913. Jhelum. ♀. Wing 84 mm.

704. „ „ Sex? „ 88 mm.

893. 9.10.1913. „ ♂. „ 92 mm.

1314. 19.2.1914. „ ♂. „ 91 mm.

1347. 20.3.1914. „ ♀. „ 88 mm.

1367. 8.4.1914. Jhelum. Wing 90 mm.

1378. 12.4.1914. " " 82 mm.

This is the most common Wagtail of the district, and may be met with from August until about the middle of May. It occurs in greatest numbers as a spring and autumn passage-migrant from March until May, and again from August until October, but is also sufficiently general and common as a winter resident.

[1347 and 1367 belong to the well-marked race *M. a. dukhunensis* of Sykes, which shows nearly as much white on the tertials, greater and median coverts, as does *M. personata*. Both specimens are in freshly moulted plumage.

The rest are typical *M. alba alba*, and therefore its range as a passage migrant and winter visitor must be extended to the Punjab (*cf.* Hartert, Vög. pal. Faun. p. 303). The April and May specimens are in full summer plumage and in fresh body-feather. Some at least, perhaps all, have recently moulted the tertials, and two specimens appear to have recently moulted the central tail-feathers. Some females have the chin and throat so narrowly edged with black in spring that much of the white bases of the feathers show, a condition I have also noted in British specimens.—C. B. T.]

***Motacilla personata*. The Masked Wagtail.**

868. 17.9.1913. Jhelum. ♂. Wing 97 mm.

892. 9.10.1913. " " 95 mm.

1377. 12.4.1914. " " 89 mm.

1379. 13.4.1914. " " 89 mm.

A common species found usually in company with the White Wagtail, but only about in the proportion of one to ten; on two or three days about the middle of March, however, the Masked Wagtail appeared to be in the majority. Its status appears to be exactly the same as that of the White Wagtail, except that it perhaps arrives a few days later and leaves a few days earlier.

[1379 has a white line running from the base of the bill to the side of the neck cutting off the black of the throat from that of the ear-coverts—a variation towards what is found in *M. p. subpersonata*.—C. B. T.]

Motacilla maderaspatensis. The Large Pied Wagtail.

774. 1.7.1913. Chua Saidan Shah. ♀. Wing 94 mm.

960. 19.12.1913. Parhi. ♂. Wing 99 mm.

Breeds in the Salt Range in July, and is probably resident, though very seldom met with.

Motacilla melanope. The Grey Wagtail.

959. 19.12.1913. Parhi. ♂. Wing 88 mm.; tail 95 mm.

A winter visitor in small numbers, noted from September until April.

[Iris dark brown; feet brown, claws and bill black, base of lower mandible steel-colour. The distinction given by Dr. Hartert (Vög. pal. Faun. p. 300), I find, does not hold good in this specimen, viz. the relative distribution of the brown colour on the shafts and inner webs of the three outer tail-feathers, while in other Punjab specimens it is very variable.—C. B. T.]

Motacilla borealis. Grey-headed Wagtail.

679. 18.4.1913. Jhelum. ♀. Wing 76 mm.

716. 10.5.1913. „ ♀. „ 79 mm.

717. „ „ ♀. „ 80 mm.

718. „ „ ♀? „ 82 mm.

729. 22.5.1913. „ ♀. „ 76 mm.

752. 6.6.1913. „ ♀. „ 74 mm. (worn).

866. 17.9.1913. „ „ 78 mm.

A very abundant spring passage-migrant, appearing in March and leaving in May; during the first half of May it was, perhaps, the most numerous species in the flocks of mixed Wagtails which were commonly to be found on the grass-lands (as, for example, the golf-course) by the river. A single bird (752) was observed in June. On the autumn passage it would seem to be less common, and I only definitely identified it in September, though it was doubtless represented in the flocks of Yellow Wagtails which were seen in August and October.

The great flocks of Yellow Wagtails were a feature of my year in Jhelum district, and the River Jhelum would seem to be a well-marked migration-route, judging from

the numbers which frequented the grass-lands along the river-banks. They started to appear about March, and reached their full numbers about the beginning of May, leaving by the end of that month. The autumn migration started in August and reached its full height in September, comparatively few birds staying into October. The total number of birds passing through in autumn would appear to be much less than in spring.

[718 is a typical male; 752 and 716 have dark slate-coloured heads and ear-coverts, the latter with an indication of an eye-streak; 729, 717, and 866 have rather browner heads and ear-coverts and a distinct eye-streak; all are more or less spotted or washed with olive on the lower throat, and have the underparts yellow. 679 has also a dark slate head and ear-coverts, with a well-marked superciliary streak and throat-mottling, but with much less yellow on the underparts. Whether this variation in females is a question of age, or whether there is another race represented amongst these, I cannot say, but 866 I regard as an adult autumn female. All spring birds are in rather worn plumage.—*C. B. T.*]

Motacilla beema. The Indian Blue-headed Wagtail.

678. 18.4.1913.	Jhelum.	♂.	Wing	82 mm.
706. 2.5.1913.	„	♀?	„	74 mm.
707. 2.5.1913.	„	♂.	„	79 mm.
895. 11.10.1913.	„	♂.	„	80 mm.
1344. 18.3.1914.	„	♂.	„	80 mm.

A common spring and autumn passage-migrant, occurring in flocks in company with other Wagtails from March until May and from August until October.

[1344 has the central tail-feathers and tertials in quill, while moult of the greater and median coverts has commenced, as well as of the body-feathers; the old feathers of the head are brown. 678 is in full fresh plumage, and appears to have moulted in the same manner, all the coverts being fresh except the primary and outer greater coverts. 707 is similar, only a shade darker on the ear-coverts. 895 is probably an adult male in winter plumage, and

merely differs from the spring male in having a darker blue head and browner back and an indication of throat-spots.
—C. B. T.]

Motacilla flava leucocephala. The White-headed Wagtail.
705. 2.5.1913. Jhelum. ♂. Wing 82 mm.

[In fresh plumage ; whole of head, cheeks, ear-coverts, and chin pure white ; a band of pale blue-grey separates the white of the head from the yellow-green mantle, otherwise like *M. beema*.

This Wagtail was described by Przewalski (Zapeski Imper. Akad. Nauk. St. Petersburg, lv. 1887, p. 85; also 'Ibis,' 1887, p. 409) from specimens obtained during spring migration on the River Irtysh and in the Altai over 1000 miles north-east of Jhelum. The breeding and winter quarters are unknown, and only a very few specimens are known. This is the first record from India (see also Bull. B. O. C. xxxv. 1914, pp. 59-60).—C. B. T.]

Motacilla citreola. The Yellow-headed Wagtail.

1332. 6.3.1914. Chakwal. ♂. Wing 85 mm.

1345. 18.3.1914. Jhelum. ♂. „ 80 mm.

[Feet and bill black. 1332 is in freshly moulted body-plumage, while the tertials and central tail-feathers, greater and median coverts have every appearance of being newly acquired. 1345 is in full moult, new yellow feathers appearing all over the old brown head and old white chin and throat ; besides the body-feathers, the central tail-feathers, and the tertials, all the median and greater coverts and some of the lesser coverts are in quill.—C. B. T.]

Motacilla citreoloides. Hodgson's Yellow-headed Wagtail.

670. 7.4.1913. Sohawa. Wing 82 mm.

715. 10.5.1913. Jhelum. ♂. „ 81 mm.

749. 4.6.1913. „ ♂. „ 83 mm.

805. 6.8.1913. „ „ 78 mm.

845. 5.9.1913. „ „ 76 mm.

867. 17.9.1913. „ „ 82 mm.

Yellow-headed Wagtails occur commonly from March (a few arriving in February) until well into May, but I have had to lump both races together, owing to the difficulty of

separating them in the field. *Motacilla citreola* was definitely identified as early as February 4, and as late as May 13. *M. citreoloides* was definitely identified first on March 6, while of two stragglers seen on June 4, one obtained was referred to that race. They occur in the mixed flocks of Wagtails, but are often found separately, and then generally in grass and reeds round small ponds. The species also is a very persistent feeder on the extreme edge of the river, frequenting the broken lumps of earth which line the higher banks marking the progress of erosion; this is also a feeding-ground beloved of *M. alba* and *M. personata*, but not of *M. beema* and *M. borealis*. Both forms of Yellow-headed Wagtail probably occur on the autumn migration.

[715 is a fully adult male; the other two spring birds have the hind-neck black, the back grey mottled with black, and I suppose them to be birds one year old; all are in fresh-moulted body-feather, and one appears to have recently moulted the tertials, one has not, while the third has moulted the longest tertial only.

The three autumn birds I place under this species tentatively; they all have brown backs, grey rumps, and broad white superciliaries, and are mottled on the lower throat with brown; one is tinged with yellow on the belly, another is pure white, while the third is tinged with pale buff on all the underparts. They would appear to be birds of the year, and therefore notoriously difficult to name. There seems to be rather a lack of good material for identifying young Wagtails, and until we can see a series of first winter birds shot in their breeding-haunts before they migrate, and after they have moulted from the juvenile dress, the difficulty will remain. The matter is further complicated by the fact that *M. citreoloides*, and perhaps some others, takes two years to become adult.—C. B. T.]

***Anthus trivialis.* The Tree-Pipit.**

853. 10.9.1913. Sardi. Wing 84 mm.

858. 12.9.1913. " " 90 mm.

881. 17.9.1913. Jhelum. ♂.

A spring and autumn passage-migrant in March-April

and September–October, usually met with in small parties. It may be of interest to note here that in September, when I went to Hazara, north-west Himalayas, for ten days' leave, I met with similar migrating parties there as high as 10,000 feet at the same time as the species was passing through the Jhelum district.

[Iris dark brown; feet pale flesh-coloured; bill dark brown above, flesh-coloured below.—C. B. T.]

Anthus similis. The Brown Rock-Pipit.

736. 27.5.1913. Dalur, Salt Range. ♂. Wing 100 mm.

859. 12.9.1913. Sardi, Salt Range. Wing 99 mm.

1341. 14.3.1914. Parhi. ♂.

Common and probably resident in the Salt Range, spreading over the district in winter. An unfinished nest found at Dalur on May 27 appeared to belong to this species.

[Iris dark brown; feet pale flesh; bill dark brown, base of lower mandible livid.

The Brown Rock-Pipits are now known as *Anthus leucophrys* Vieillot, and the specimens which Mr. Whistler obtained in the Salt Range belong to the race *jerdoni* Finsch, the darker *similis* being found in southern India.—C. B. T.]

Anthus rufulus. The Indian Pipit.

741. 31.5.1913. Jhelum. ♂. Wing 83 mm.

1352. 25.3.1914. „ ♂.

Breeds in April. Not uncommon, but status uncertain.

[Iris hazel; feet yellow-brown; bill dark horn above, flesh-coloured below.—C. B. T.]

Anthus campestris. The Tawny Pipit.

849. 8.9.1913. Lilla. Wing 90 mm.

1334. 10.3.1914. Dumman. ♂. Wing 89 mm.

Not known to breed in the district, and probably a winter visitor or passage migrant only.

[Iris dark brown; feet brownish flesh-coloured; bill flesh-coloured, culmen and tip blackish. The spring bird is moulting the body-feathers and tertials, the autumn one is completing a full moult.—C. B. T.]

Anthus spinoletta blakistoni. The Central Asian Water-Pipit.

941. 3.12.1913. Jhelum. Wing 83.5 mm.

943. 7.12.1913. Chakwal. ♂.

946. 8.12.1913. „ ♂. Wing 89 mm.

Noted in some numbers in December in flocks on the golf-course by the river and about the tank at Chakwal.

[Iris and feet dark brown, soles yellowish; bill brown, base of lower mandible yellowish. These are typical *A. s. blakistoni*.—C. B. T.]

Alauda arvensis. The Sky-Lark.

952. 16.12.1913. Parhi. Wing 119 mm.

An abundant winter visitor, occurring in large flocks which arrive about October and leave towards the end of March.

[Iris light brown; tarsi brown, claws black; bill horn-colour, darker along the culmen. This specimen I refer to *A. arvensis schach* Ehmcke, from its very pale sandy upper parts, though sufficient material is not at hand to say whether this race is really separable from *A. a. cinerascens* Ehmcke.—C. B. T.]

Alauda gulgula. The Indian Sky-Lark.

852. 10.9.1913. Sardi. ♂.

Status uncertain, but it is probably a resident, reinforced by winter immigration. Breeds in April.

Calandrella brachydactyla. The Short-toed Lark.

953. 16.12.1913. Parhi. ♀. Wing 90 mm.

1336. 11.3.1914. Dumman. ♂. „ 89.5 mm.

A winter visitor, occurring abundantly in large flocks; first noted on October 13, and still numerous in the middle of March.

[Iris brown; feet pale brown; bill horn-colour, dusky along the culmen. These specimens belong to the greyer eastern form, *C. b. longipennis*.—C. B. T.]

Alaudula adamsi. The Indus Sand-Lark.

722. 11.5.1913. Jhelum. ♀. Wing 78 mm.
 780. 5.7.1913. " Imm. " 80 mm.
 840. 4.9.1913. " ♂.
 972, 973. 10.1.1914. Jhelum. ♂, sex ?

This is the common Lark of the river-bed, where it is resident, breeding on the sand-banks and islands of the river in April, and collecting in flocks in winter. These flocks appear to move about but little, as I observed one frequenting the same patch of ground by the river from January 10 until February 19. The species is an excellent mimic; one individual while singing was heard to give an exact imitation of the call of *Sarcogrammus indicus* as heard from a distance, while the alarm-call with which *Totanus ochropus* springs into flight was several times introduced into the song.

From Hume's 'Nests & Eggs of Indian Birds' (ed. 2, vol. ii. p. 226) it appears that the eggs of this Lark were first described by Captain Cock, from Jhelum.

[Iris dark brown; feet brown; bill dusky horn-colour above, flesh-brown below. 780, which Mr. Whistler thinks, by the soft yellow gape and incomplete ossification of the skull, to be a bird of the year, is making a complete moult.—C. B. T.]

Galerita cristata. The Crested Lark.

Bill from edge of
Wing. forehead feathers.

860. 12.9.1913.	Sardi.	♂.	102	16 mm.
954. 16.12.1913.	Parhi.		98	17 mm.
955.	"	"	105	16 mm.
961. 19.12.1913.	"		104	17 mm.

A common resident, said to breed from the fourth week of March until May. It is found everywhere, including the river-valley and the same ground as the last species, but is most numerous in the Salt Range and the broken ground of the Chakwal plateau.

[Iris light brown; feet horn-colour; bill horn-brown. These specimens belong to the race *G. c. chendoola* Franklin. 860 has just completed a full moult.—C. B. T.]

Ammomanes phoenicuroides. The Desert Finch-Lark.

Wing. Bill from base.

673. 10.4.1913. Dumman. ♂. 101 14 mm.

962. 19.12.1913. Parhi. ♀. 99 12.5 mm.

1330. 3.3.1914. Dumman. ♀. 96 12.5 mm.

Resident and common, but confined to the nullahs and rocky ground of the Salt Range and the Chakwal Plateau.

[Iris and tarsi pale brown; feet darker, claws blackish; bill brown, base of lower mandible yellow. All are in worn plumage.—C. B. T.]

Pyrrhulauda grisea. The Ashy-crowned Finch-Lark.

851. 10.9.1913. Sardi. ♂. Wing 75 mm.

880. " " Juv. Nestling.

The nestling with parent bird was obtained from a nest at Sardi, in the Salt Range, where the species was common. The nest was of neat construction, slight and cup-shaped, on the open ground by a tuft of grass and small stones; there were also a few about Lilla (on the plain exactly below Sardi) at that date. I did not again visit that neighbourhood, and only met with the species elsewhere at Jhelum, where, at the end of March and beginning of April, a couple of flights and a pair were noted on migration.

[Adult. Iris brown; feet pinkish brown; bill pale bluish grey. The nestling shows the usual dark pattern of juvenile plumage, having brown feathers on the upper parts with creamy-buff bases and tips; the wing-feathers are edged and tipped with warmer buff; underparts creamy buff; what little nestling-down remains is buffish white.—C. B. T.]

Pyrrhulauda melanauchen. Black-crowned Finch-Lark.

Captain Whitehead met with this species in fair numbers in December in the fields some four miles north of Lilla, and obtained a male for verification. This was some 300 miles north-west of the previously recorded range of the species (though I have since obtained the species and found it in small numbers at Chautala, Hissar district). The exact status of these two small Larks in the Punjab requires working out.

Arachnothera asiatica. The Purple Sun-bird.

A very common summer resident, arriving during the first half of March and leaving towards the end of August and the beginning of September, the last individual being noted on September 17. Breeds commonly from April to June. Occurs throughout the Salt Range.

Dendrocopos sindianus. The Sind Pied Woodpecker.

Resident and fairly common in the Salt Range and those parts of the district which lie north of it. Apparently it does not occur south of the Salt Range, which is here its boundary.

Liopicus mahrattensis. The Yellow-fronted Pied Wood-pecker.

674. 11.4.1913. Dhodha. ♂. Wing 106 mm.

A common resident throughout the district and in the Salt Range.

[Iris claret-colour; feet very dark plumbeous; bill plumbeous grey, darker on culmen and tip.—C. B. T.]

Brachypterus aurantius. The Golden-backed Wood-pecker.

A common resident in the district south of the Salt Range, which is its northernmost limit. It thus occurs in those parts of the district where *D. sindianus* does not, the Salt Range forming the boundary. I found a nest-hole being excavated early in April, and was brought a newly-fledged young bird on July 4.

Iynx torquilla. The Common Wryneck.

843. 4.9.1913. Jhelum. Wing 88 mm.

1324. 1.3.1914. Chakwal. ♂. Wing 87 mm.

A spring and autumn passage-migrant, noted on April 11 (2), May 9, and September 4, 1913, and March 1, 1914.

[These specimens are much paler above, especially on the scapulars and rump, than British specimens in my collection. Dr. Hartert, who kindly examined them, tells me there are equally pale specimens at Tring from Sweden, East Prussia,

and Russia, and dark specimens resembling the British ones are to hand from Norway, Sweden, and Germany, so that it would appear to be a case of individual variation.—*C. B. T.*]

Megalæma marshallorum. The Great Himalayan Barbet. 1360. 1.4.1913. Jhelum. ♀. Wing 139 mm.

This specimen, shot in my compound, was the only one met with. It is a rare straggler from the Himalayas.

[Iris dark brown, eyelid plumbeous; feet olive-green, claws lead-black; bill, basal half bright yellow, rest of lower mandible and median part of upper lead-black.—*C. B. T.*]

Xantholæma hæmatocephala. The Crimson-breasted Barbet.

Occurrence doubtful, but I heard what was perhaps its call on April 4 and July 16, 1913. It is common in the Gujranwala district a little further south, but does not occur in the Rawal Pindi district.

Coracias indica. The Indian Roller.

A common resident, probably also partly migratory, as it becomes less noticeable from about the second half of October until the middle of February. Nests chiefly in May and June.

Coracias garrula. The European Roller.

A not uncommon summer visitor, noted only in May and June. It is mostly confined to the nullahs of the broken country north of the Salt Range (and there it possibly breeds), but I saw one flying across the Jhelum River some miles below Jhelum on June 8.

Merops viridis. The Common Indian Bee-eater.

686. 21.4.1913. Jhelum. ♂. Wing 96 mm.

A very numerous summer resident, arriving during the first half of March (first noted on the 3rd, and general by the 15th) and leaving in October, very few remaining until the middle of that month. An individual was haunting the District Board garden until well into December. It occurs over the Salt Range.

[Iris red ; feet purplish brown ; bill black. This appears to belong to the race *M. v. beludschicus*.—C. B. T.]

Merops philippinus. The Blue-tailed Bee-eater.

702. 3.4.1913. Jhelum. ♂. Wing 129 mm.

753. 7.6.1913. „ ♂. „ 135 mm.

783. 9.7.1913. „ ♂. „ 138 mm.

A common summer resident, found throughout the district including the Salt Range, but most generally observed in the neighbourhood of water. It arrives in April, being first seen on the 6th, and is abundant by the end of the month ; it leaves again in September. However, I saw two flights, apparently of this species, in October, namely, on the 4th and the 11th.

Merops persicus. The Blue-cheeked Bee-eater.

847. 7.9.1913. Lilla. Imm. Wing 132 mm.

Several immature birds of this species were noticed about Lilla on September 7.

[Iris vinous brown ; feet dark plumbeous ; bill black. Just commenced the body-moult.—C. B. T.]

Ceryle varia. The Indian Pied Kingfisher.

724. 11.5.1913. Jhelum. Wing 139 mm.

A common resident, met with almost invariably in pairs along the river, where it breeds in the banks. I dug out six eggs from a burrow on February 8. Many nests suffer from the erosion of the banks ; this seems to be the only check on their increase.

[This is the *C. rudis leucomelanura* Reichenb., with the basal half of the tail pure white and the underparts with roundish black spots.—C. B. T.]

Alcedo ispida. The Common Kingfisher.

772. 1.7.1913. Chua Saidan Shah. ♀. Wing 75 mm.

Met with occasionally throughout the year, both in the Salt Range and by the Jhelum River.

[Iris dark brown ; feet orange-red, claws black ; bill black above, dusky flesh-colour below. Had recently laid. This belongs to the form *A. ispida bengalensis*.—C. B. T.]

Halcyon smyrnensis. The White-breasted Kingfisher.

Resident and fairly common throughout the district, being probably most numerous in the gardens of the Salt Range.

Upupa epops. The European Hoopoe.

844. 5.9.1913. Jhelum. ♂. Wing 148 mm.

It is difficult to work out the status of this bird, but it would seem to be resident in small numbers, a winter visitor in small numbers, and a passage migrant in February and March, and from August to October. I noticed a most marked migration of these birds on the 24th and 28th of August, on which dates I had occasion to travel from Mandra to Chakwai. They were then, and especially on the latter date, most numerous along the road in small parties—and this is ground where, in the summer, I would usually see only one or two individuals, and in the winter some half dozen in the whole 39 miles. *Upupa indica* was not noted, but it probably occurs occasionally.

[Iris dark brown; feet lead-brown; bill flesh-coloured at base, darkening to black.]

A young bird moulting body-feathers; it appears to belong to the typical race.—C. B. T.]

Cypselus melba. The Alpine Swift.

A spring passage-migrant in March and April, and an autumn passage-migrant in August and September.

Cypselus apus. The European Swift.

Only noted on the autumn migrations in very small numbers in August and September.

Cypselus affinis. The Common Indian Swift.

Common, and noted in every month save December and January; it becomes scarcer in October and November, and but few birds were noted in February. Breeds commonly about March and April.

Caprimulgus europaeus. The European Nightjar.

734. 26.5.1913. Dalur. ♂. Wing 181.5 mm.

This specimen which had the testes greatly enlarged and

was probably breeding, was the only Nightjar actually shot by me in the district.

I flushed a Nightjar (sp.?) in the Rak on 2nd June. No other specimens were seen in the district, but I fancy that some species will be found common in the Salt Range.

[Iris dark brown, feet lead-colour; claws black; bill plumbeous, black at tip.

This specimen is typical *C. europaeus unicolor*, and if, as seems almost certain, it was breeding, it would extend the breeding-range of this race a good deal farther south than that given by Dr. Hartert (Vög. pal. Faun. vol. ii. p. 849). —C. B. T.]

Cuculus canorus. The Cuckoo.

709. 6.5.1913. Jhelum. ♂ ad. Wing 220 mm.

727. 15.5.1913. " ♂ ad. " 225 mm.

838. 31.8.1913. " ♀ imm. " 210 mm.

A fairly common spring and autumn passage-migrant in April, May, August, and September; but it is possible that an odd bird or two may stay to breed, as on June 26 I saw what was evidently a Cuckoo being mobbed by a pair of Tailor-birds. The earliest bird was noted calling on April 4.

[*Adult*. Iris, eyelid, and feet orange; claws brown; bill black above and at tip, a patch in front of nostrils and basal half of lower mandible olive-green, gape orange.

Neither these specimens, nor others from elsewhere in the Punjab, have the characters of *C. c. telephonus*, all being very coarsely marked with black cross-bands on the lower parts and under tail-coverts; neither does the grey of the throat nor length of wing differ from European examples, and therefore, I must assign Mr. Whistler's specimens to the typical form which, according to Dr. Hartert, does not go farther east than Persia (*cf.* Vög. pal. Faun. ii. p. 945). The autumn bird shows the rufous phase of plumage, and has the iris brown, eye-rim yellow, and lids plumbeous.—C. B. T.]

Coccystes jacobinus. The Pied Crested Cuckoo.

759. 15.6.1913. Jhelum. ♂. Wing 150 mm.

760. " " ♂. " 153 mm.

Not common, noted as follows:—June 15, three birds seen, of which two were shot; August 28, a single individual seen on the Chakwal tonga-road; August 31, one seen near the Rak; September 4, one seen near the Rak. In addition to the above, I believe I heard one calling at Chua Saidan Shah on June 30. In Hume's 'Nests and Eggs' (2nd edit.), vol. ii. p. 388, it is stated to breed in August in the Salt Range.

[Iris dark brown; bill black; tarsi lead-grey, feet darker. Hairy caterpillars in gizzard.—C. B. T.]

Eudynamis honorata. The Indian Koel.

695. 27.4.1913. Jhelum. ♀. Wing 194 mm.

746. 2.6.1913. " ♂. " 190 mm.

788. 16.7.1913. " ♀. " 192 mm.

816. 13.8.1913. " Juv. " not grown.

827. 20.8.1913. " ♀ juv. " not grown.

A summer visitor, arriving in April (first heard on the 11th), but not becoming common until well into May. About September the species begins to depart, and the last bird noted was seen on October 6. I obtained eight eggs in all from nests of *Corvus splendens* between June 26 and July 12, of which two were in one nest and three in another. In the latter instance there were no Crow's eggs left in the nest.

[Male. Iris red; feet plumbeous olive; bill plumbeous grey. Wild figs in gizzard.

827 is moulting out of the juvenile dress, which differs from that of the adult female in having the upper parts brownish black with only slight gloss; brown bars replace the white bars on the upper tail-coverts and wings, and the wing-coverts are tipped with white; the underparts similar to the adult female, but the chin and throat black. 816, which probably came from the same nest, is evidently a juvenile male, and differs from the adult male only in being

less glossy and rather a rustier black. Both birds are in full body-moult.—*C. B. T.*]

Centropus sinensis. The Common Coucal.

817. 13.8.1913. Jhelum. ♀. Wing 220 mm.

As far as I know, this species only occurs in one place in the district, namely, in the Rak at Jhelum, where a few pairs are resident. In January I saw one on several days sitting in a slight stick nest, possibly an old Crow's, at the top of a willow sapling, but apparently no eggs were laid.

[Iris crimson; feet and bill black. Ovary contained an egg the size of a Swallow's. Frog and beetle remains and a noctuid chrysalis in gizzard.—*C. B. T.*]

Palæornis nepalensis. The Large Indian Paroquet.

A common resident, breeding in March and April. Large numbers collect to roost in the Rak.

Palæornis torquatus. The Rose-ringed Paroquet.

1301. 12.2.1914. Jhelum. ♀. Wing 178 mm.

A very common resident. Large numbers roost in the Rak.

[Iris yellow, inner ring grey; eye-rim orange; feet sage, claws plumbeous; cere dull yellow, broad; bill purplish red, tip and lower mandible black.—*C. B. T.*]

Palæornis cyanocephalus. The Western Blossom-headed Paroquet.

936. 28.11.1913. Jhelum. ♂. Wing 144 mm.

983. 23.1.1914. " ♂. " 147 mm.

995. 30.1.1914. " ♀. " 143 mm.

A not uncommon winter visitor from the second half of November until February. Also noted during the autumn migrations, when a single male was observed on the 1st of October, and a party of five on the 2nd.

[*Male.* Iris whitish yellow with grey inner ring; feet plumbeous olive-green, claws grey; bill, upper mandible, dull orange, lower mandible black; cere dirty olive-green.

Female. Upper mandible yellow.—*C. B. T.*]

Strix flammea. The Barn-Owl.

On October 31 I was shown a living specimen which had been caught in Jhelum city.

Asio accipitrinus. The Short-eared Owl.

A single specimen seen on November 1, when it was circling in the air for a long time in the afternoon, being mobbed by Crows. What was almost certainly the same specimen was flushed on the golf-course on November 3.

Ketupa zeylonensis. The Brown Fish-Owl.

920. 4.11.1913. Jhelum. ♂.

This specimen was shot in the Rak, where I saw it before on October 10.

Bubo bengalensis. The Rock Horned Owl.

Probably resident and fairly common in the Salt Range.

Several Owls which appeared referable to this species and not *B. coromandus*, were noted about Jhelum during the winter in the Rak, including one that used to sleep in a peepul-tree in my compound. One was flushed from under a small tamarisk bush on an island of the river on February 8.

Bubo coromandus. The Dusky Horned Owl.

A few pairs are resident in the Rak at Jhelum, where I found a nest containing two eggs on January 4. They were often heard calling an hour or two before sunset. For a long time I was puzzled as to their food-supply in the thick jungle of the Rak, but one evening during daylight I flushed an owl carrying a black object which appeared to be part of a crow. This incident, combined with the fact that the Rak is littered with portions of defunct crows, suggest that these Owls find an easy living amongst the hordes of Crows, Mynahs and Starlings which roost nightly in the Rak.

Athene brama. The Spotted Owlet.

677. 16.4.1913. Jhelum. ♂. Wing 164 mm.

A common resident, occurring throughout the district, including the Salt Range.

[Iris yellow; feet dirty greenish yellow; claws lead-black; bill dirty lead-green; cere much darker, eyelid plumbeous.

This belongs to the lighter race, *A. b. tarayensis*, of Hodgson.—C. B. T.]

Vultur monachus. The Cinereous Vulture.

A winter visitor in small numbers, a few being noticed on various dates from November 17 until April 10. The largest number seen in one day was five. The weight of a specimen shot on November 27 (sex not ascertained) was $14\frac{1}{2}$ lbs.

Otrogyps calvus. The Black or King Vulture.

Moderately common, and to be met with throughout the year, although there are decidedly fewer about in summer, when many probably go up to the Hill Sanatoria. They breed about March, but a nestling only a day or two old was brought to me on April 15.

Gyps fulvus. The Griffon Vulture.

Common and to be met with at all times of the year, although it does not appear to breed in the district. This is the common Vulture of the Salt Range, where numbers may be seen about the sheer hill-sides. Near Sohawa there is a small precipice which shows as a white patch on the hill-side for many miles, due to the excreta of the Griffons, which use it as a resting-place. I was informed by a native officer who lives in a neighbouring village, that he could remember the patch from the days of his boyhood.

Pseudogyps bengalensis. The Indian White-backed Vulture.

The commonest Vulture of the district; this species may be considered the Vulture of the plains, whereas the last is more truly the Vulture of the Salt Range, although both species of course may be met anywhere collected together in numbers. I did not find any breeding-colony, but Theobald (Hume's 'Nests and Eggs,' 2nd ed. vol. iii. p. 206) records the species as breeding in March near Pind Dadan Khan and Katas.

***Neophron percnopterus.* The Egyptian Vulture.**

Resident and very numerous, breeding commonly in March and April on ledges of small cliffs in the broken country all round the Salt Range. Theobald's record of the breeding of *Neophron ginginianus* near Pind Dadan Khan and Katas (Hume's 'Nests and Eggs,' 2nd ed. vol. iii. p. 214) must refer to this race.

***Gypaetus barbatus.* The Bearded Vulture or Lammer-geyer.**

I noted two of these fine birds near Chua Saidan Shah on June 30, and two near Sohawa on February 4; but, unfortunately, I did not spend enough time in the Salt Range to make out the bird's exact status, whether it breeds in the Jhelum portion of the hills or not.

***Aquila bifasciata.* The Steppe Eagle.**

A pair of these huge Eagles were met with sitting on a wide cultivated plain on November 8. One was shot and found to weigh $6\frac{3}{4}$ lbs. (sex not ascertained). It was in immature plumage, and so extraordinarily fat that I failed to preserve it. On January 22 in the Rak I noted two Eagles that were probably of this species.

***Aquila vindhiana.* The Indian Tawny Eagle.**

905.	21.10.1913.	Jhelum.	♂.
969.	6.1.1914.	"	♀.
1300.	9.2.1914.	"	♀.
1325.	1.3.1914.	"	♀.

This is the common Eagle of the district, and may be found at all times of the year, though it is probably partly migratory, its numbers undergoing an increase in winter, *i. e.* the breeding-season. Nests were found on the following dates:—January 5, c/2 slightly incubated; January 6, c/2 fresh; February 9, c/2, one egg fresh, one slightly incubated; February 10, c/2 fresh; March 1, c/1 slightly incubated; March 5, c/1 moderately incubated. The weight of female birds killed varied from $4\frac{1}{2}$ to $4\frac{3}{4}$ lbs.

Hieraëtus fasciatus. Bonelli's Eagle.

Hume remarks of this species ('Nests and Eggs of Indian Birds,' 2nd ed. vol. iii. p. 140) : "Many pairs were breeding in the precipices of the Salt Range, near Mayo Mines, when I last visited there." The Mayo Mines are those situate at Khewra, above Pind Dadan Khan.

Hieraëtus pennatus. The Booted Eagle.

A specimen was seen in the Rak on January 25 ; it had just taken a crow, which my terrier surprised and captured from the bird while it was on the ground.

Butastur teesa. The White-eyed Buzzard-Eagle.

675. 12.4.1913. Chakwal. ♂. Wing 308 mm.

742. 31.5.1913. Jhelum. ♂. " 308 mm.

A common summer resident and breeding-species, first noted on March 20, and last seen on October 13. The eggs are laid about the end of April.

[Iris white, tinged with lemon ; feet dirty yellowish ; claws black ; cere dull orange-yellow ; eyelid dull orange ; bill, basal half flesh-yellow, anterior half black. Beetles, grasshoppers, and lizards in gizzard.—C. B. T.]

Haliaëtus leucoryphus. Pallas' Fishing Eagle.

A fairly common winter visitor from September until about the end of March, the eyries being situated all along the river at intervals of a few miles. There is a well-known eyrie situated about two miles above Jhelum city at the top of an enormous cotton-tree, which can only be scaled with the aid of ropes. This nest contained two eggs on February 25, which appears to be an unusually late date.

Milvus govinda. The Common Pariah Kite.

A very common resident, found everywhere, including the Salt Range. Nidification commences in January.

It is probable that *Milvus melanotis* will be found to occur as a winter visitor in the neighbourhood of Jhelum. I believe that several very large Kites seen by me about January were of that species, but unfortunately no specimen was shot.

Elanus cœruleus. The Black-winged Kite.

Twice noted, one at Dumman on March 2, and one at Jhelum on March 27. The latter was hovering over the lands by the river, and was much worried by crows.

Circus macrurus. The Pale Harrier.

Circus cineraceus. Montagu's Harrier.

Circus cyaneus. The Hen-Harrier.

These three species of Harrier all probably occur in the district, with *Circus macrurus* in the majority, but I have not obtained any specimens, and am not well acquainted enough with these Harriers to separate them on the wing. It must suffice to say that I have observed "grey" adult and "ring-tail" immature Harriers to be common, especially on migration in September and October, and from February until April; a few also have been observed in the winter months.

Circus æruginosus. The Marsh-Harrier.

1368. 8.4.1914. Jhelum. ♂. Wing 411 mm.

Fairly common from August until April, except in December and January. A single individual in very ragged plumage noted on June 8; occurs in the Salt Range.

[Iris and feet yellow; cere greenish; eyelid plumbeous; claws blue-black; bill blue-black, lighter at the base. Lizards in gizzard.—C. B. T.]

Buteo ferox. The Long-legged Buzzard.

951. 15.12.1913. Parhi Darweza. ♂.

1312. 17.2.1914. Jhelum. ♀.

A fairly common species, but only noted in winter from about November until February. Theobald states that this bird breeds in March in the Salt Range of Jhelum district, but Hume ('Nests and Eggs,' 2nd ed. iii. p. 126) shows considerable doubt of the correctness of the assertion, which is not supported so far as my observations go. It is, of course, possible that Theobald met with an isolated pair breeding, as the nest has been found on one occasion at Nowshera.

but that *Buteo ferrox* is accustomed to breed in the Salt Range must, I think, be clearly denied.

Buteo desertorum. The Desert Buzzard.

916. 3.11.1913. Jhelum. ♂. Wing 378 mm.

In addition to the specimen obtained, a second bird, probably of this species, was observed to be haunting the heavier jungle in the Rak during the whole of January.

[Iris pale brown; feet yellow; claws black; bill black; cere and gape dull greenish yellow.—C. B. T.]

Astur palumbarius. The Goshawk.

I have no records of this Goshawk occurring in the district, but it is generally stated amongst the natives of the upper part of the district that stray birds have been caught in the Diljabbar Rak in the Salt Range. One bird in particular is talked of as having had "a snow mark" on it when caught, a sign that it had that morning arrived from the Himalayas, which stand out clearly to be seen across the Jhelum River.

Astur badius. The Shikra.

747. 3.6.1913. Jhelum. ♀ ad. Wing 206 mm.

826. 20.8.1913. " ♀. " 207 mm.

836. 30.8.1913. " ♂. " 178 mm.

876. 17.9.1913. " ♂ ad. " In moul.

A common resident in the district, including the Salt Range. There were also signs of a distinct autumn passage about October and November. These game little Hawks are easily caught by means of a net called the "Do gazza," consisting of a square of fine net about 6 ft. by 4 ft., hung vertically between two upright sticks, in front of which a live quail is tethered as bait. The Hawk stoops at the quail and gets entangled in the net. In fact, they are apt to be a nuisance, often being taken in nets set for nobler quarry. The Shikra is chiefly used to take Mynahs and Quail, being held in the hand and literally thrown at the bird selected.

[Adult male. Feet yellow, claws black; cere dull greenish yellow; bill blue-grey, anterior half black.

Juvenile. Feet pale greenish yellow; iris pale yellow.

The female had both right and left ovary developed; the adult male is just completing a full moult.—C. B. T.]

Accipiter nisus. The Sparrow-Hawk.

1356. 28.3.1914. Jhelum. ♂. Wing 208 mm.

A not uncommon winter visitor from September until the first half of April; said to occur often on the sparsely-wooded slopes of the Salt Range; at any rate, I noted a male on February 4 in a small tree in one of the bare nullahs at the base of the hills.

[Iris orange with a paler inner ring; feet bright yellow; bill, basal half blue-grey, rest black; cere and gape dull greenish yellow.

This is a paler bird on the upper parts than British specimens, and in this respect matches some from China.—C. B. T.]

Pernis cristatus. The Crested Honey-Buzzard.

A summer visitor in small numbers, first noted on March 18 and last on October 28. A pair or two probably breed in the Rak.

Falco peregrinus. The Peregrine Falcon.

957. 10.12.1914. Jhelum. ♀. Wing 365 mm.

A not uncommon winter visitor from the beginning of October until the last week in March, chiefly met with along the river. The Peregrine in the Jhelum district is a bird of very fixed habits. Having arrived, it selects a regular locality and stays there, largely keeping to one particular tree as a resting-place. Before sunrise it sallies forth to hunt, and having fed, retires to the favourite tree for meditation until the evening brings it out again. The same line of flight may be followed for several days in succession as it proceeds to the hunting-grounds. Peregrines were often to be seen in the gardens of the Civil Lines—at one time I knew of at least three individuals that had been noticed within a mile of my bungalow.

***Falco peregrinator.* The Shahin Falcon.**

A young falcon of the year was brought in to me on November 27 by two men who saw it fall from a tree in the Civil Lines ; it proved to be suffering from a gunshot wound in the breast, and was so exhausted that it was a question whether I should kill the bird for a specimen or hand it over to my falconer ; the latter course prevailed, and my man managed to save its life and train it to the lure. The species is probably a fairly regular winter visitor, as there is a well-known eyrie in the foot-hills some 30 miles away, from which Colonel Stephen Biddulph once obtained a good cass of Eyasses.

***Falco barbarus.* The Barbary Falcon.**

Not known to breed in the district, but probably a passage migrant. Several medium-sized Falcons seen were doubtless of this species, but definite identification is difficult except with the aid of a gun or under the most favourable circumstances. I have seen or possessed several Barbary Falcons (if *F. barbarus* is really the correct name of *F. babylonicus*) which were caught on their first migration in July and August in the Campbellpore district farther north.

[In order to avoid any confusion, I must point out that the species which Mr. Whistler met with was almost certainly *F. peregrinus babylonicus* of Slater, and is no doubt the race which Anglo-Indians call the Barbary Falcon. The Barbary Falcon proper, however, is a North-African form, now known as *F. peregrinus pelegrinoides* of Temminck—the *Falco barbarus* of most authors ; this name, which was given by Linnæus to a Falcon depicted by Albin, however, has been recently rejected, as it is considered that Albin's plate is unrecognisable (*vide* Hartert, Vög. pal. Faun. ii. p. 1051).—C. B. T.]

***Falco jugger.* The Laggar Falcon.**

The common and resident Falcon of the district, nesting in March and April, both in trees and in holes and on ledges of the cliffs in the Salt Range and the nullahs of the Chakwal

plateau. Although but seldom trained in the Punjab, owing to the ease with which better kinds of Falcon are obtained, the Laggar is a bold bird of fine flight, and to the falconer is a nuisance through resenting the presence of trained birds on its own particular beat. I have seen one stoop at a Peregrine feeding on its owner's wrist, and at hooded Peregrines placed temporarily on the ground, while on another occasion a pair drove out of sight and lost for me a young Barbary which I had flown at a Partridge. They are not such fast flyers as Peregrines.

***Falco cherrug.* The Saker or Cherrug Falcon.**

A not uncommon winter visitor, noted on various dates from November until February. On April 9 a trained Falcon of this species was caught in an exhausted condition by a man near Jhelum and brought in to me, but I never found the owner, who had most likely released it at the end of the season.

***Æsalon regulus.* The Merlin.**

942. 5.12.1913. Chakwal. ♂. Wing 200 mm.

A winter visitor in small numbers, noted from December until February.

[Iris dark brown; feet yellow, claws black; bill, basal half blue-grey, anterior half black.

This belongs to the pale race, *Æ. r. insignis* Clark.—
C. B. T.]

***Æsalon chicquera.* The Red-headed Merlin.**

828. 21.8.1913. Jhelum. ♂. Wing 197 mm.

A common and resident species, nesting in March and April.

[Iris brown; feet bright yellow, claws black; bill, basal half flesh-yellow, rest blue-black; eyelid and cere bright yellow.—C. B. T.]

***Tinnunculus alaudarius.* The Kestrel.**

1350. 22.3.1914. Jhelum. ♂. Wing 246 mm.

A common winter visitor from August until the beginning of April. Possibly a few pairs breed in the Salt Range, as

an occasional bird may be seen on the Chakwal plateau in the hot weather, and I noted a couple at Chua Saidan Shah on June 30.

[Iris dark brown ; feet bright yellow, claws blue-black ; bill blue-black, darkest at tip and shading to yellowish at base ; cere yellow, eyelid greenish yellow.

This specimen is paler everywhere than many British examples ; but I can match it with a Suffolk specimen.—*C. B. T.*]

Crocopus sp. Green Pigeon.

A pair of Green Pigeons appeared in my compound on November 26 ; but I was unable to identify the species, and did not see them again.

Columba intermedia. The Indian Blue Rock-Pigeon.

A common resident throughout the district, breeding both in buildings and in small cliffs.

Turtur ferrago. The Indian Turtle-Dove.

A spring and autumn passage-migrant, noted in April and October ; but not many were met with. An odd bird or two probably occurs during the winter as well.

Turtur suratensis. The Spotted Dove.

932. 21.11.1913. Jhelum. ♀. Wing 130 mm.

964. 2.1.1914. " ♂. " 140 mm.

Uncommon. Two noted on November 21, and single birds noted on January 2, February 10, and March 21. A winter straggler from the foot-hills.

[*Adult.* Iris claret-colour ; eyelids and feet duller, claws blackish ; bill lead-black.

932 is in juvenile plumage just commencing to moult, and has the iris pale reddish brown ; tarsi plum-colour ; feet and bill plumbeous.—*C. B. T.*]

Turtur cambayensis. The Little Brown Dove.

A common resident throughout the district, including the Salt Range, where it is one of the most noticeable birds along the hill-roads. Nests may be found throughout the hot weather, but are most numerous from April until June.

Turtur risorius. The Indian Ring-Dove.

A most abundant resident, occurring throughout the district, but less numerous in the Salt Range than the last species. About January and February the Ring-Dove collects in large flocks, and is then very noticeable in the fields. Nests throughout the hot weather.

Onopopelia tranquebarica. The Red Turtle-Dove.

A common summer visitor, arriving about the middle of March and becoming general before the end of the month; it leaves again in August, the last bird being seen on 2nd September. Nests in April and May.

Pterocles arenarius. The Large or Black-bellied Sand-Grouse.

A winter visitor, occurring in flocks on the Chakwal plateau and in larger numbers towards Pind Dadan Khan. Not observed near Jhelum. The first birds were reported to me as seen on the 1st of October. Last noted on February 22; but I did not have an opportunity of visiting the best ground for them after that date.

Pteroclurus exustus. The Common Sand-Grouse.

698. 30.4.1913. Jhelum. ♀.

848. 7.9.1913. Lilla. ♂. Wing 175 mm.

862. 14.9.1913. „ ♂. „ 185 mm.

A resident species, whose numbers are very largely increased during the winter by migration commencing about the beginning of September. Most numerous on the Pind Dadan Khan side of the Salt Range.

[Iris dark brown; feet and bill lead-slate; eyelids lead-colour. Seeds and beetles in gizzard. Just completing a full moult.—C. B. T.]

Pavo cristatus. The Common Pea-fowl.

Very numerous in the gardens of the Salt Range and about Jelalpur, but not occurring on the Chakwal plateau or about Jhelum. It is, of course, a resident species.

Coturnix communis. The Common or Grey Quail.

680. 26.4.1913. Jhelum. ♂. Wing 109 mm.

681. " " ♀. " 112 mm.

856. 11.9.1913. Sardi. ♂. " 112 mm.

857. " " ♂. " 108 mm.

A spring and autumn passage-migrant in varying numbers, the migrations attaining their height in April and September respectively.

[Iris yellow-brown ; feet brownish flesh ; bill dark horn-brown. The September birds are adult and just commencing to moult.—C. B. T.]

Caccabis chucar. The Chukor Partridge.

A resident in fair numbers on the higher slopes of the Salt Range. Theobald notes that it breeds in April and May.

Ammoperdix bonhami. The Seesee Partridge.

Resident and fairly numerous in the Salt Range, being found from the base upwards. Eggs were obtained for me in April, but I met with a covey of half-grown young, strong on the wing, on the 2nd of July. Theobald says that it breeds in April, May, and June.

Francolinus pondicerianus. The Grey Partridge.

A resident throughout the district, but somewhat scarce, except in the Salt Range Raks. According to Theobald it lays in the first week of April and in May and September.

Turnix dussumieri. The Little Button-Quail.

Theobald ('Nests & Eggs,' 2nd ed. vol. iii. p. 371) describes the breeding of the Little Button-Quail in the third week of August in the neighbourhood of Pind Dadan Khan, hence it is probable that a Button-Quail flushed by me at Chakwal on October 23 was, as I thought, of this species. From the bordering territory of Gujar Khan in Rawal Pindi district, in May 1911, a clutch of four eggs, almost certainly of this species, were brought in to me by a shikari. This Button-Quail is therefore, in all probability, a resident, but scarce in these parts.

Porzana pusilla. The Eastern Baillon's Crake.

Two Crakes only were met with by me in the district, and both were apparently of this species on migration ; one was flushed on May 10 by the Rak, and the other on September 2 on the golf-course.

Gallinula chloropus. The Moorhen.

Noted as numerous on a tank at Sohawa on April 8.

Fulica atra. The Coot.

Two seen, both on the river close above Jhelum, on October 4 and January 19 respectively.

Both the Waterhen and the Coot are probably found on the jheel at Kallarkahar—a place that I have not been able to visit.

Grus communis. The Common Crane.

A winter visitor from October until April, and of course most numerous in the riverain area below Jhelum.

Houbara macqueeni. The Houbara Bustard.

A winter visitor from November until February, according to the district gazetteer. I saw two only, namely, one in the fields amongst rocky ravines near Sangoi on November 30, and one near Chakwal on November 23 ; but I believe that they are fairly numerous in the direction of Pind Dadan Khan.

Esacus recurvirostris. The Great Stone-Plover.

894. 10.10.1913. Jhelum. ♀.

A summer visitor to the sand-banks of the river, where it breeds, from the end of March (first noted on the 27th) until the middle of October. I found two eggs on a sand-bank island on April 10, 1914, within a few yards of where I had found two young in down on April 30, 1913.

Cursorius gallicus. The Cream-coloured Courser.

988. 25.1.1914. Jhelum. ♂. Wing 168 mm.

989. " " " ♀. " 157 mm.

A party of three were seen on bare rocky ground near

Chakwal on October 23, and a party of seven or eight were found on a sandy island on the river above Jhelum on January 25. The stomachs of the two birds shot contained grasshoppers.

Glareola lactea. The Small Indian Pratincole.

683. 20.4.1913. Jhelum. Wing 163 mm.
690. 22.4.1913. " " 157 mm.
691. 24.4.1913. " In down.
809. 11.8.1913. " ♂ imm. Wing 142 mm.
863. 15.9.1913. " ♂. Wing ?

A most extraordinarily abundant summer visitor to the Jhelum valley, arriving about the end of February (a single bird being noted on the 27th) and disappearing by the second week in October (last seen on the 10th). It breeds in April on the sand-banks of the river or amongst the stones on the mud-flats that border some of the larger islands. Immense numbers of nests, indeed whole colonies at a time, are swept away when the river is swollen by rain-water or melted snow, and this seems to be the only check to their increasing beyond all bounds, for they have no enemies that I know of.

Every evening from June onwards a steady flight of Pratincoles up the river, individuals and flocks, took place, and I presume that they must work down again during the night, as I never observed the return flight. The large eyes suggest that they are nocturnal to some extent. On August 11 I saw five or six large flocks flying at so great a height that I was unable to identify them through glasses until they descended to lower levels.

[Iris dark brown; feet and bill black, gape scarlet.

809 is just finishing a complete moult, and appears to have traces of juvenile plumage remaining. It differs from the adult spring birds in having the whole throat ticked with dark brown, and in having pale rufous edges to the head and faint greyish edges to the mantle-feathers. 863 is also finishing a complete moult and is an adult; it differs from 809 in having the pale edges of the upper parts and

the ticking on the throat only just indicated. The downy young is buffish white above, indistinctly mottled on the head and back with dark brown; underparts whitish; feet and bill plumbeous grey, blackish at tip.—C. B. T.]

Hydrophasianus chirurgus. The Pheasant-tailed Jacana.

Noted as follows:—June 11, six near Sohawa; June 15, one by the river; June 24, three on the river; July 18, one on the river. Evidently a passage migrant only.

Sarcogrammus indicus. The Red-wattled Lapwing.

A resident in small numbers, and greatly reinforced during the summer months by immigrants, which begin to arrive in February and reach their full numbers by the middle of March. They would seem to leave again about the middle of September, but a few of the departing birds linger on into October. The species is comparatively scarce during the winter. It makes an interesting quarry for trained Falcons unless there is too much cover, when it is apt to put in and may be taken up in the hand.

Vanellus vulgaris. The Lapwing or Peewit.

986. 25.1.1914. Jhelum. ♂. Wing 227 mm.

1306. 14.2.1914. " " ♀. " 215 mm.

A fairly common winter visitor, first seen on November 17 and last noted on March 6.

Chettusia gregaria. The Sociable Lapwing.

Several flocks were noted about in March and the last few days of February; it is probably a spring passage-migrant only.

Chettusia leucura. The White-tailed Lapwing.

A flock of Lapwings seen near the river on November 9 were apparently of this species.

Egialitis alexandrina. The Kentish Plover.

687, 688, 689. 22.4.1913. Jhelum. ♀, ♂, ♀. Wing 119, 108, 103 mm.

889. 6.10.1913. Jhelum. Wing 110 mm.

902. 15.10.1914. " " ♂. " 110 mm.

903. " " Sex? " 109 mm.

Occurs not infrequently in parties and in flocks, but its exact status is not clear; possibly a passage migrant only. Most birds were found in October, January, and March, but odd birds were met with in September and April, and two were seen on the 12th of July. A party of three was found in a sandy torrent bed near Chakwal on October 25, and these were the only ones noted away from the river.

[Iris dark brown; bill and feet black.

The September birds are young ones moulting the body-feathers. The spring females have the lores, crown, and half-collar rusty brown. All belong to the typical race.—*C. B. T.*]

Ægialitis dubia. The Little Ringed Plover.

692, 693, 694. 26.4.1913. Jhelum. Nestlings in down.

864. 15.9.1913. Jhelum. Imm. Wing 109 mm.

Common and found throughout the year but probably partly migratory, as their distribution was rather uneven during different months. Breeds commonly about April on the sand-banks of the river and, I believe, in the sandy "kas" or torrent-beds of the Chakwal plateau, where I found them in pairs in March and April. This Plover is more often found away from the water and feeding on the grassy stretch by the river than the Kentish Plover, which keeps almost entirely to the sand-banks.

[Iris dark brown; eye-rim pale yellow; feet olive-yellow; claws and bill black.

In full body-moult, just acquiring the black collar and frontal band. Downy young have the feet lead-grey. They differ from *Æ. hiaticola* of the same age in the following respects:—A more distinct black line above the eye passes round the base of the crown above the white collar; below the white collar a black band passes round on to the throat; a black band sharply separates off the white carpus from the rest of the wing; a black band separating upper- and under-parts along the flanks to the tail is more distinct.

I am unable to state whether these specimens belong to the race *Æ. d. jerdoni* or not. A breeding female from elsewhere in the Punjab has a *broad* frontal band of black and

a wing of 110 mm. (worn), bill 11 mm. Unfortunately, in the latest review of the species ('Ibis,' 1915, p. 533), the authors omit to give the length of the wing in the two sexes, also the length of the bill. This specimen had in life the base of the bill *red*, and not bright yellow as is said to be invariably the case in adults of *A. d. jerdoni*.—C. B. T.]

***Himantopus candidus*. The Black-winged Stilt.**

A passage migrant in small numbers during April–May and August–September; a few birds may also be met with during the winter.

***Numenius arquata*. The Curlew.**

Two were seen on the river on November 6 above Jhelum.

***Limosa Belgica*. The Black-tailed Godwit.**

On August 31 I saw a party of six large Waders flying down stream; I did not obtain a specimen, but feel certain that they were of this species.

***Totanus hypoleucus*. The Common Sandpiper.**

676. 17.4.1913. Jhelum. ♀. Wing in moult.

711. 7.5.1913. " ♂. " 107 mm.

726. 11.5.1913. " ♀. " 115 mm.

The Common Sandpiper may be met with in every month of the year in the Jhelum district, as, although it does not breed within the district, yet it does so commonly in Kashmir, whence comes the Jhelum River, and the river is evidently one of the recognised routes to and from the breeding-grounds; hence there are always a few birds, either late in going up to breed or early in coming down, or else not breeding at all, to be found along the river-banks and islands. It is most numerous on passage in April and May and again from August until October, but is also sufficiently common during the winter months from November until March. This Sandpiper is ordinarily a solitary species, but I met with some flocks on migration on May 6. It can swim and dive well if necessary.

[Iris dark brown ; feet pale olive-green, claws blackish ; bill olive-brown, blackish towards the tip and fleshy towards the base of lower mandible.

The April bird is in full moult all over—body, wings, and tail.—*C. B. T.*]

Totanus glareola. The Wood-Sandpiper.

803. 3.8.1913. Jhelum. ♂. Wing 121 mm.

803. 10.8.1913. " ♂. " 124 mm.

A fairly common passage-migrant in small flocks in April and again in August and September. It frequents flooded fields and marshy ground, and was not noted on the sand-banks of the river. Found as high as Sardi in the Salt Range.

[Iris dark brown ; feet greenish olive, claws black ; bill black, lighter olive at base.

803 in juvenile dress, 808 in worn breeding-plumage.—*C. B. T.*]

Totanus ochropus. The Green Sandpiper.

1362. 3.4.1914. Jhelum. ♀. Wing 144 mm.

A common winter visitor and a spring and autumn passage-migrant ; a few non-breeding birds may also be met with during the summer months. The spring migration passes through in April and May, and the return passage commences in July and reaches its height in August.

[Iris dark brown ; legs dull lead-green ; bill lead-black.—*C. B. T.*]

Totanus calidris. The Redshank.

925. 9.11.1913. Jhelum. ♀. Wing 163 mm.

926. " " ♂. " 164 mm.

990. 25.1.1914. " ♀. " 159 mm.

A winter visitor common from January until May and in less numbers from August (first noted on the 5th) until December. Only met with in the neighbourhood of the river.

[Iris dark brown ; feet orange-red ; bill dark plumbeous, base of lower mandible reddish.

Full winter plumage.—*C. B. T.*]

Totanus glottis. The Greenshank.

696. 30.4.1913. Jhelum. ♀. Wing 195 mm.
 839. 31.8.1913. „ ♀. „ 195 mm.
 890. 6.10.1913. „ ♂. „ 188 mm. (worn).
 949. 10.12.1913. „ ♂. „ 179 mm.
 1370. 10.4.1913. „ ♀. „ 201 mm.

A winter visitor, and a spring and autumn passage-migrant in March and April and August and September respectively; a few late birds were met with in May and one or two early arrivals in July. None were seen in June.

[Iris dark brown; feet pale plumbeous green, claws blackish; bill olive-grey, darker towards tip.

The April birds are nearly into summer plumage, moulting the body-feathers together with the long tertials and innermost greater and median coverts. 839 is in juvenile dress; 890 is adult, just completing a full moult; 949 is a young bird in full winter dress, and has moulted the body-feathers, tertials and their coverts, and probably part of the tail.—
C. B. T.]

Pavoncella pugnax. The Ruff and Reeve.

1331. 6.3.1914. Chakwal. ♂. Wing 187 mm.
 1338. 13.3.1914. Dumman. ♂. „ 190 mm.
 1351. 24.3.1914. Jhelum. ♀. „ 161 mm.

Appeared in flocks on migration from March 6 until April 10. Found both on the river, or on patches of marshy ground anywhere in the district.

[1351 is in winter plumage still; the other two have commenced to get the summer plumage, but no ruff is visible yet. The female has the legs dull lead-colour; the males have the legs pale orange and pale fleshy brown respectively.—*C. B. T.*]

Tringa minuta. The Little Stint.

927. 9.11.1913. Jhelum. Wing in moult.

[An adult just completing full moult.—*C. B. T.*]

Tringa temmincki. Temminck's Stint.

820. 17.8.1913. Jhelum. ♂. Wing 101 mm.
 978. 18.1.1914. „ „ „ 99 mm.
 987. 25.1.1914. „ „ ♀. „ 96 mm.

Stints were noted about the sand-banks and mud-flats of the river, and occasionally at ponds throughout the district, singly, in parties, and in flocks, on numerous dates from the 5th of August until the 22nd of April. I am, however, quite unable to tell the Little Stint and Temminck's Stint apart without the aid of a gun, so have to lump the two species together. The majority were seen from January until April.

[Iris dark brown; feet gamboge, claws blackish; bill lead-black.]

The August bird is in worn breeding-dress and has just begun to moult.—*C. B. T.*]

***Tringa alpina.* The Dunlin.**

I saw what appeared to be a few Dunlins in a large flock of the smaller Waders on the 12th and 25th of January, but no specimens were obtained.

***Gallinago cœlestis.* The Common Snipe.**

A few were met with on different dates during the winter in small patches of marshy ground. There is no good Snipe jheel in the district.

***Gallinago gallinula.* The Jack Snipe.**

883. 3.10.1913. Jhelum. Wing 115 mm.

Shot from a ditch by the golf-course.

[Iris brown; feet pale grey-green; bill lead-grey to black at tip.—*C. B. T.*]

***Larus ridibundus.* The Laughing Gull.**

886. 4.10.1913. Jhelum. Wing 305 mm.

1348. 20.3.1914. " " " 298 mm.

A number of these Gulls were noted on the river during the spring migration in the latter half of March, and a few were seen on the autumn migration in August and October. An occasional bird may be found during the winter.

The birds seen in March were mostly, if not all, immature.

[Iris brown; feet fleshy-orange, claws black; bill flesh-pink with black tip.]

Both are young birds in first winter plumage.—*C. B. T.*]

Larus cachinnans. The Yellow-legged Herring-Gull.

A large immature Gull, seen on the river on October 27, was most probably of this species.

Hydrochelidon hybrida. The Whiskered Tern.

712. 7.5.1913. Jhelum. ♀. Wing 225 mm.

713. " " " 234 mm.

723. 11.5.1913. " " 234 mm.

778. 5.7.1913. " " 217 mm.

Immense numbers were seen on the river from April until the first week in July, and it is remarkable that they were usually to be seen working up-stream, *i. e.*, towards Kashmir, their breeding-ground. But whether this was a steady migration of birds passing upwards without intermission, or whether I saw the same birds, or many of them, day after day, and they were merely feeding upwards to return down again by night, I cannot say. Of the return autumn migration I saw no trace except a couple of old birds in September.

[Iris rich brown; feet red, claws black; bill dark purple-red.

The adult July bird has just commenced to moult the body-feathers and wings; the May birds are adult and in fresh body-feather, with traces of moult on crown and throat.—*C. B. T.*]

Sterna anglica. The Gull-billed Tern.

A few were seen on migration in the second half of March and the first half of April. It is possible that some birds breed in the district, as two pairs were met with on June 8 between Jhelum and Jelalpur. Besides the above, a Tern which appeared to belong to this species was noted on July 13 and August 11.

Sterna seema. The Indian River-Tern.

766. 19.6.1913. Jhelum. Imm. ♀. Wing 265 mm.

804. 6.8.1913. " Ad. ♀. " 276 mm.

A very common resident, breeding on the sand-banks of the river in March and April.

[Feet yellow, claws black ; bill dull yellow, blackish at tip.

A juvenile bird just commencing body-moult. The adult has the iris dark brown, feet coral-red, and is moulting all over.—C. B. T.]

1504. *Sterna melanogaster*. The Black-bellied Tern.

699, 700, 701. 30.4.1913. Jhelum. ♂, ♂, ♂. Wing 215,
220, 227 mm.

, 725. 11.5.1913. Jhelum. ♂. Wing 218 mm.

763. 16.6.1913. „ ♂. „ 207 mm. (worn).

765. 19.6.1913. „ „ 228 mm.

909. 28.10.1913. „ ♀. „ 236 mm.

975. 12.1.1914. „ ♀. „ 240 mm.

1357. 30.3.1914. „ ♀. „ 224 mm.

A very common resident, breeding on the sand-banks of the river in March and April. The statement that the winter plumage consists in the cap being white with a few black streaks, and the lower parts white does not appear to be correct. Birds in the supposed winter plumage were almost entirely noticed from May until August, whereas practically every bird noticed in the winter (and I paid especial attention to this) had a black cap and belly. The change will probably be found to be one of age and not season.

[From Mr. Whistler's remarks it appears that the plumages of this species are not rightly understood, and unfortunately his specimens do not entirely clear the matter up. That some birds in winter plumage have the head and belly black is clear from his statement, and is borne out by the October adult bird, which has just completed a full moult, and has the crown, belly, and under tail-coverts pure black. The January and April birds are in similar plumage, but slightly worn. The March bird has old worn brown feathers with grey edges on the crown, amongst which new black feathers are appearing ; new pearl-grey feathers on mantle, belly, and under tail-coverts ; old, worn feathers (white), amongst which are one or two odd black feathers.

The May birds are similar; both have paler bills than the adult, with dusky tips. Mr. Whistler notes of the March bird that "the ovary was minute at a time when most pairs had eggs, and that very few of these white-bellied birds were to be seen." I regard these two birds as young non-breeding birds of the previous year.

Similar to these last two is the June bird (763), which undoubtedly is a non-breeding bird of the previous year, and represents a stage further on in the sequence of the plumage. It, like the May birds, has an old brown crown, which is being replaced by black, and is getting new white feathers on the underparts; wings and tail have just begun to moult. Parts of this plumage are probably moulted again about September, and the bird, getting the black belly, now becomes fully adult. Details of this change are lacking, as neither Mr. Whistler nor the British Museum has any August or September birds; but in a series of 52 birds obtained from October to May, every month being represented by several specimens in the British Museum, *no birds are in any plumage but the adult plumage* (with black crown and belly and long streamers), except what are obviously birds of the year (with brownish head edged with grey, white underparts, and short streamers). Moreover, a late bird from Burma on Nov. 19 in the British Museum shows the last stage of this moult.

765 is an interesting bird; it is obviously fully adult, and the black head and belly are being replaced by *white* feathers in June, and the moult of wings and tail has just begun. Now we know from the above that all, except birds of the year, by October have black crowns and bellies, so that this white plumage can only be held for a short time, say two months, and is moulted again. It may appear strange at first that a Tern should assume breeding-plumage by October, breed in March in that plumage, and then moult into a sort of eclipse plumage about June and then into breeding-plumage again by October; and yet it is not so very startling when one considers that when the Arctic Tern leaves us about September it has not yet assumed its winter plumage, and that

by the end of January it is well on its way into breeding-plumage again, though it is not going to nest much before the beginning of June. It looks as if the winter plumage in these Terns is only held for a short time, and may, perhaps, correspond with the eclipse plumage of Drakes.

To sum up, then, the sequences of plumage in this species so far as I am able to trace them :—

The juvenile plumage, which is of the usual type and roughly resembles that of the Sandwich Tern, is moulted some time during the autumn, and the bird attains its first winter plumage, in which the crown is brown with grey edges, underparts white, mantle pearl-grey, and it has short streamers and the tip of the bill dusky. From the following March onwards a slow and irregular moult takes place, some new black feathers appear in the crown and odd black feathers on the belly, and the bird does not breed ; by June the bird is moulting everywhere, including wings and tail, and gets a new white belly and long streamers, while the dusky tip to the bill is now lost ; by October the underparts, at all events, have been moulted again, and the bird now has the belly black and is adult ; this plumage is carried through to the following year, and the bird then breeds. About June the black belly and head is moulted to a white, and the wings and tail are shed with the rest of the body-plumage ; this white phase is only held for a short time, and by October the bird is again in breeding-plumage.

I am much indebted to Mr. F. W. Smalley for his kindness in going carefully through the series in the British Museum and making notes for me.—*C. B. T.*]

***Sterna minuta.* The Little Tern.**

Not common, and probably a summer visitor only, breeding on the sand-banks. First noted on April 3 and not seen after July 12.

***Rhynchos albicollis.* The Indian Skimmer or Scissors-bill.**

802. 2.8.1913. Jhelum. ♂. Wing 382 mm.

A summer visitor to the river in small numbers ; first

noted on March 20 and last seen on August 15. Breeds about April.

[Iris dark brown; feet bright vermillion, claws black; bill orange-red, yellowish at tip.

Adult just commenced to moult.—*C. B. T.*]

Pelecanus sp.? Pelican.

Pelicans were seen on the river as follows:—April 28, one; June 19, one; July 5, one; July 18, two. In no case was a specimen killed, so the species represented remains uncertain.

Phalacrocorax carbo. The Large Cormorant.

Would appear to be a passage migrant only. In January several were seen on various dates from the 4th to the 25th, a big flight of about 30 being met with on January 12. On the autumnal migration several birds were noted from October 10 until November 3.

Ibis melanocephala. The White Ibis.

A flight of White Ibises were seen on June 19, and two birds were seen with a party of *Pseudotantalus leucocephalus* on a sand-bank on the river on June 24. Not known to breed in the district.

Inocotis papillosus. The Black Ibis.

882. 2.10.1913. Jhelum. Imm.

Not uncommon, and met with throughout the year, but I do not believe that the species nests in the district.

Platalea leucorodia. The Spoonbill.

Probably a summer visitor only, from the end of May until August, and breeding doubtless somewhere in the neighbourhood of the river. Not very often seen, but as many as 20 birds were met with in one flock. No nests found.

Ciconia alba. The White Stork.

A party of three White Storks was seen by the Chakwal tonga-road on December 8, and one was seen flying high overhead at Jhelum on April 9.

***Ciconia nigra.* The Black Stork.**

Solitary Storks seen on February 24 by the Chakwal tonga-road, and on the 8th of March at Miswal, appeared to belong to this species.

***Dissura episcopus.* The White-necked Stork.**

Two were seen at Sangoi on the 1st of February, and two (possibly the same) flying down the river near the Rak at Jhelum on April 12.

***Xenorhynchus asiaticus.* The Black-necked Stork.**

A few Black-necked Storks were seen in a field by the river between Jhelum and Jelalpur on June 8.

***Pseudotantalus leucocephalus.* The Painted Stork.**

770. 24.6.1913. Jhelum. ♀.

784. 12.7.1913. " ♀.

Between June 2 and September 2 a number of these fine birds were noted haunting the river in the neighbourhood of the Government Rak. They were most numerous in June, but, after that, generally appeared in twos and threes, although a party of seven were seen on August 13. No nesting-place was discovered, and both the above birds had minute ovaries, so they were possibly on migration. An odd bird or two was seen in the same place on the 10th, 11th, and 12th of April, just before I left the district.

***Ardea manillensis.* The Eastern Purple Heron.**

A large Heron flushed from a reed-bed in the middle of the river opposite to Jhelum city on June 24 was almost certainly of this species.

***Ardea cinerea.* The Common Heron.**

Although not known to breed in the district, Herons were noted in every month of the year except September and October. There was a very marked passage on the river near Jhelum during April.

***Herodias alba.* The Large Egret.**

991. 4.2.1914. Sohawa. ♂.

An odd bird or two were met with during the winter, and

a party of four or five were found on the river on April 10, doubtless on migration. It probably does not breed in the district. .

Herodias garzetta. The Little Egret.

684. 20.4.1913. Jhelum. ♂. Wing 284 mm.

A summer visitor in some numbers to the river, where I found a nesting colony breeding in company with *Bubulcus coromandus*, *Ardeola grayi*, and *Nycticorax griseus* on a small thickly wooded island. Odd birds arrived early (first date noted February 27), but the species did not become common until the end of March, and perhaps did not attain to its full numbers until May. Breeding operations went on from June until August, and the majority left about September, a few birds remaining about until the beginning of October. Luckily, the fishermen and shikaris do not know the value of the plumes.

[Iris yellow; bill, tarsi, and tibia black; feet mixed blue and yellow. Occipital and some neck plumes in quill, otherwise in full plumage.—C. B. T.]

Bubulcus coromandus. The Cattle Egret.

762. 16.6.1913. Jhelum. ♀. Wing 238 mm.

810. 11.8.1913. " Nestling.

A summer visitor: although it appeared in larger numbers than *H. garzetta* it arrived later, about May, commenced to leave in August, and had almost entirely departed by the end of September. It breeds in June and July, and apparently finishes breeding before the last species. The nests of this species were far the most numerous of any in the above mentioned colony.

[Iris yellow; legs mixed olive-green and brown, claws black; bill reddish yellow.

The nestling has the down white, iris white tinged with yellow, skin dull olive-green tinged with yellow along the throat and fore neck; bill and facial skin of a somewhat similar colour.—C. B. T.]

Ardeola grayi. The Pond Heron.

757. 15.6.1913. Jhelum. ♂. Wing 219 mm.

A resident, whose numbers are greatly increased during the breeding-season by immigration. These additional birds appear to arrive about May and depart again in September and the first half of August. It nests in June and July in any suitable clump of trees.

[Feet flesh-coloured tinged with yellow, claws black; facial skin yellow-green; bill: basal half blue, median portion and commissure yellowish, terminal third black.—*C. B. T.*]

Butorides javanica. The Little Green Heron.

779. 5.7.1913. Jhelum. ♀.

This specimen was shot on the sandy shore of the island mentioned above as the breeding-place of the Egrets. The ovaries, however, were but slightly developed. Another or the same individual was seen on the 21st of June near the golf-course.

Nycticorax griseus. The Night Heron.

761. 16.6.1913. Jhelum. ♂.

A common summer visitor, arriving towards the end of March and leaving at the end of August and beginning of September. A few nests were found in the Egret colony in June.

• *Phoenicopterus roseus.* The Common Flamingo.

Capt. Whitehead informs me that Flamingoes are common throughout the winter in the Salt Range Lake of Kallar Kahar. Although I did not visit the lake myself, I had an opportunity of examining a skin obtained there, and found it to belong to this species.

Anser ferus. The Grey Lag Goose.

A common winter visitor to the neighbourhood of the river and to the Kallar Kahar Lake. Noted as late as March 22.

***Anser indicus.* The Barred-headed Goose.**

A common winter visitor, noted as late as March 22. I was unable to observe the respective dates of arrival of the two kinds of Geese owing to difficulty of identifying the species without obtaining specimens, but I saw and heard Geese from the 9th of November onwards.

***Casarca rutila.* The Ruddy Sheldrake.**

A very abundant winter visitor to the district, where I first noted it on the 28th of October. On the stretches of the river above Jhelum in January and February it was extraordinarily abundant, being met with in large flocks of 20 or 30 birds. On one occasion as many as 75 were counted on a single sand-bank. The majority of these birds, however, had gone by the middle of March, although a few were to be met with in April, a party of seven or eight being seen as late as the 22nd of that month.

Note.—The number of ducks which visit the district during the cold weather is very large, although, as far as I know, no species actually breeds within the district. As, when there are so many varieties to be expected and the area over which they are spread is so great, it is impossible to identify half the individuals seen, I failed in the short space of one year to work out the exact status and dates of arrival of each species. Accordingly, before giving a list of the species actually identified by me (which does not pretend to be complete), I give a short general note on the dates of arrival and departure of ducks generally.

After the spring migration had passed, four ducks, apparently some species of Pochard, were seen from the train on May 23, June 11 and 24, on a small pond in the ravine-broken ground between Dina and Domelli Railway Stations. It is possible, but not probable, that these birds were breeding there, but I was unable to visit the spot to investigate the matter. Two ducks the size of Mallard were seen on the river on June 24.

In August the return migration started by the noting

of a single duck on the 8th, and very few more had been met with by the end of the month. September, of course, saw a fair increase, and this grew steadily until it reached the maximum about January. About the beginning of March numbers began to dwindle, and by the end of the month there was a most noticeable decrease. Throughout April a few ducks were to be met with, and a few parties of Shovellers passed through during the first half of May.

Anas boscas. The Mallard.

The most common species of Duck during December, January, and February, but leaving early about the beginning of March. It is found in immense numbers on the sand-banks of the river, and visits every little grassy pond or patch of marsh in small parties.

Chaullelasmus streperus. The Gadwall.

Common winter visitor; appears to leave about the end of March, a few staying over into April.

Nettion crecca. The Common Teal.

1000. 8.2.1914. Jhelum. ♂. Wing 180 mm.

A very abundant winter visitor; the majority have left by the end of March; a few may be met with during April.

Dafila acuta. The Pintail.

Common in February and March.

Querquedula circia. The Garganey or Blue-winged Teal.

861. 12.9.1913. Sardi. ♂. Wing 198 mm.

Only definitely identified on September 12, when I met with a couple in a flooded field at Sardi in the Salt Range.

[Iris brown; feet plumbeous slate; bill plumbeous black. A male in full eclipse plumage.—C. B. T.]

Spatula clypeata. The Shoveller.

A common winter visitor, and the latest of the ducks to depart; migrating parties may be met with on the river in April and the first half of May.

Nyroca ferina. The Pochard.

A common winter visitor; noted as late as April 22.

Nyroca ferruginea. The White-eyed Duck.

1343. 16.3.1914. Sohawa. ♂ ad. Wing 180 mm.

Fairly common, considering the scarcity of suitable waters for it.

[Iris whitish; feet mixed black and plumbeous, webs black; bill plumbeous black.—*C. B. T.*]

Nyroca fuligula. The Tufted Duck.

Common winter visitor, staying well into March.

Mergus albellus. The Smew.

974. 12.1.1914. Jhelum. ♀. Wing 178 mm.

This bird was secured from a flock noticed diving in the shallows of the river above Jhelum.

Podicipes albipennis. The Indian Little Grebe.

A resident, but not numerous owing to the scarcity of suitable waters.

IV.—*Note on a remarkable Honey-eater (Woodfordia superciliosa North) from Rennell Island in the Western Pacific.*
By C. M. WOODFORD, C.M.G., late Resident Commissioner, British Solomon Islands Protectorate.

(Plate III.)

SITUATED to the south-east of the Solomon Group in the western Pacific are the two islands marked on the British Admiralty Charts as Rennell and Bellona.

Rennell is situated about ninety miles to the south of San Cristoval, and Bellona is about fifteen miles to the north-west of Rennell.

Both islands are inhabited by natives of Polynesian race, totally distinct from the Melanesian natives of the Solomon Group, and there is no communication between them.

The native name of Rennell is "Mangana," and that of Bellona "Mangiki."

I am informed that the natives of Rennell call the south-west portion of their island "Bethona," and the central

**SKECH MAP OF THE
HELM DISTRICT**

Map of the Metropolis

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